

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2024.—Vol. XLIV.

LONDON, SATURDAY, JUNE 6, 1874.

[WITH SUPPLEMENT.] {PRICE FIVEPENCE. PER ANNUM, BY POST, £1 4s.

**MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,**  
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.  
(SUCCESSOR TO JAMES CROFTS.)  
Established 1842.

BUSINESS transacted in every description of BRITISH and FOREIGN Stocks and Shares, and in all COLLIERY and IRON Shares.  
SPECIAL BUSINESS in shares not having a general market value.

SPECIAL BUSINESS in the following COLLIERIES:—Cardiff and Swansea, Clee Hill, Hookley Hall, New Sharlston, Silkstone Fall, Thorpe's Gwawer Hall, United Bituminous, and Welsh Freehold.  
MISCELLANEOUS:—Newcastle Chemical Works, Javali, Fitzroy Bessemer, St. Agnes Consols, Palmer's Shipbuilding.  
Business in Glaisdale Quarry Shares.  
Special information on OLD BOTTLE HILL MINE. A few shares for sale.  
Bankers: City Bank, London; South Cornwall Bank, St. Austell.

**MR. W. H. BUMPUS, STOCK AND SHARE DEALER,**  
44, THREEDNEEDLE STREET, LONDON, E.C., has FOR SALE the following SHARES, at prices annexed, free of commission:—  
50 Asheton, £23 1/2. 50 Fortuna, £4 1/2. 100 Rica (Gold), 7s. 50 Rosewall Hill, 11s. 3d. 25 Birdseye, £23 1/2. 70 Gt. West Van, 23s. 9d. 20 Richmond, £26 1/2. 30 So. Carn Brea, £3 1/2. 80 Bumpus, £4 1/2. 50 Herodfoot, £2 1/2. 25 Sweetland, £4 1/2. 100 Teconia, 31s. 3d. 100 Tincroft, £32 1/2. 100 Tankerville, £29 1/2. 40 Utah, 28s. 35 Unit. Mexican, £4 1/2. 10 Van, £27 1/2. 25 Van Consols, £4 1/2. 10 Wheel Grenville, £4 1/2. 5 Wheel Kitty, £2 1/2. 50 Wh. Mary Hute, £2 1/2. 70 West Maria, 10s. 6d. 40 W. Tankerville, 31s. 3d. 150 Frantion, 6s. 6d. 15 Roman Grav., £16 6s. 3 5 West Chiverton.  
London Office of Reference for Drake Walls and South Rosker Mines.  
W. H. B. transacts business in every description of Stocks and Shares at the best market prices, and free of commission.  
Bankers: National Provincial Bank of England, E.C.

**MR. E. J. BARTLETT, STOCK AND SHARE DEALER,**  
No. 30, GREAT ST. HELEN'S, LONDON, E.C., transacts business at the best prices in every description of securities.  
Colliery Shares, well selected, will afford good returns. E. J. B. has for sale some fully paid shares in thoroughly bona fide undertakings, with a guarantee of 10 per cent. Full particulars on application.  
SPECIAL BUSINESS in Llay Hall and Alltarn Colliery shares; also Denbighshire Consolidated, Minera, East Lovell, and Pennerley.

**MR. JOHN RISLEY (SWORN), STOCK AND SHARE BROKER,**  
BROKER, 77, CORNHILL, LONDON, E.C.  
Brokerage on Buying or Selling shares of £4 and upwards, 1 1/2 per cent., and 1s. per share on each under £4.

**FERDINAND R. KIRK, STOCK BROKER,**  
5, BIRCHIN LANE, E.C.  
Welsh Freehold, United Bituminous, and Glaisdale Quarry Shares are worth buying.  
NEWCASTLE CHEMICAL.—SPECIAL BUSINESS as BUYER or SELLER.  
BUSINESS at close prices in:—  
Cape Copper, Eries, Welsh Freehold.  
Cedar Creek, Egyptians, Newport Abercarn.  
Cardiff and Swansea, Atlantics, Silkstone Fall.  
Chapel House, Flagstaff, Littledean.  
Clee Hill, Dolcoath, West Mostyn.  
BUYERS of New Sharlston and Dunraven Adare are invited to communicate.  
Consols, Foreign Bonds, Railways, and every security quoted on 'Change bought and sold. Forthrightly accounts opened on references being given.  
Bankers: London and Westminster, and City Bank.

**MR. WILLIAM WARD**  
(Late WARD and LITTLEWOOD),  
CROSBY HOUSE, 95, BISHOPSGATE STREET WITHIN, E.C.,  
DEALS IN ALL KINDS OF STOCKS AND SHARES, for cash or the account.

**MR. HENRY MANSELL, STOCK AND SHARE DEALER,**  
14, GREAT WINCHESTER STREET, LONDON, E.C.  
H. M. recommends the purchase of COLORADO TERRIBLE shares.

**MR. W. TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C.,**  
Deals in all descriptions of Stocks and Shares at close market prices.

**MESSRS. W. DUNN AND CO., STOCK AND SHARE DEALERS,**  
3 AND 4, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.  
Orders received and commissions executed.  
Bankers: National Provincial Bank of England.

**MR. G. E. SIMPSON, STOCK AND SHARE DEALER,**  
6, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C., will SELL the FOLLOWING SHARES, free of commission:—  
50 Bampfyde, £2 12s. 6d. 25 Emma, £2 1/2. 15 So. Carn Brea, £3 1/2. 25 Birdseye, £23 1/2. 50 Flagstaff, £4 5s. 10 Tankerville, £29 1/2. 80 Chontales, 14s. 9d. 50 Old Treburtett, 16s. 3 3 Tincroft, £31 1/2. 10 Cook's Kitchen, £9 16 3 15 Perkins Beach, 11s. 10 W. Basset, £10 10s. 10 Dolcoath, £4 1/2. 15 Richmond, £26 1/2. 20 West Chiv., £2 6s. 3d. 100 Emma Consols, 17s. 10 Roman Grav., £16 2 6 30 W. Grenville, £4 17 6 5 East Lovell, £12 18s. 9d. 20 Sweetland, £4 1/2. 20 Wheel Kitty, £2 1/2.

**MESSRS. MILLER AND CO., STOCK AND SHARE DEALERS,**  
61 and 62, QUEEN'S BUILDINGS, QUEEN VICTORIA STREET, LONDON, E.C., PUBLISH A DAILY and WEEKLY LIST of Prices of Funds, Government Securities, Banks, Railways (home and foreign), Mines, Docks, Gas, Telegraph, Waterworks, and miscellaneous companies shares.  
Messrs. MILLER and Co. have Special Business in the TREASURES and GENERAL LIGHTERAGE and TRANSPORT COMPANY (Limited) at close market prices; and are Sellers of Eberhardt, East Lovell, Emma, Roman Gravels, Last Chance, Bampfyde, and New Quebrada.  
All orders punctually attended to, for cash or account.  
Bankers: Prescott, Grote, Cave, and Co., Threaddneedle-street, London, E.C.

**MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS,**  
85, GRACECHURCH STREET, LONDON, E.C.  
Government and every negotiable Stocks dealt in for cash or account. Orders and telegrams punctually attended to.  
We advise immediate application and purchase of the BAMPFYDE and LLAENWYR shares. A rise in price is inevitable.

**MR. GEORGE BUDGE, STOCK AND SHARE DEALER,**  
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C.

**MESSRS. WM. MARLBOROUGH AND CO.,**  
20, BISHOPSGATE STREET WITHIN, LONDON, E.C. (Established 18 years), have FOR SALE the following SHARES at prices annexed:—  
50 Almada, 13s. 10 Herodfoot, £2 1/2. 30 So. Condurow, £36 3 30 Bumpus, £4 1/2. 50 Last Chance, £2 1s. 3d. 50 Teconia, 28s. 6d. 35 Boga, 16s. 20 Lovell, 20 Tankerville, £29 16s. 3d. 30 Malabar, 14s. 6d. 3 Tincroft, £32. 50 Malpas, 13s. 50 Utah, 28s. 30 New Quebrada, £3 2 6 50 Old Treburtett, 17s. 75 Penstruthal, 11s. 6d. 50 Prince of Wales, 13s. 50 Pennerley, 28s. 40 Plynlimmon, 6s. 6d. 30 Richmond, £26 18s. 9d. 40 Rosewall Hill, 7s. 9d. 20 Rookhope, 19s. 20 Rom. Gravels, £16 8s. 9 60 So. Roman Gravels, £16 8s. 9 20 Sweetland, £4 1/2. 25 So. Carn Brea, £3 1/2. 25 So. Condurow, £36 3 30 Almada, 13s. 10 Herodfoot, £2 1/2. 30 So. 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In the midst of all our strife, dissensions, and distrust the progress of civilisation, intercourse between peoples and nations, coupled with social amelioration and uninterrupted prosperity, continue; while the healthy influences they inspire, foment friendships both at home and abroad, and add to the intelligence, industry, and increase of our wealth and population. The engineer and contractor has given us railways, telegraphs, steam machinery, both land and marine. This manufacture, locomotion, and mining are indebted to those gentlemen for the efficiency, products, progress, and permanency of those industries and thrifty sources of productive wealth. Still, enterprise is one thing, while investment is another. The former can often flourish without capital—brains supplying the lack of money; but investment absorbs, or should do so, the earnings and savings of the multitude, together with the accumulated riches of the millionaires, or the favoured child of fortune. Yet the investor, if he would win, must graduate as a student of his science, he must call forth painstaking labour to his aid, or he most probably will lose in part or in whole his money. He is not the "jobber" upon the surface current of the "market," nor is the investor the haphazard gambler who blunders on, listening to all that wise and foolish say, and who acts without judgment or principle, thus usually losing, and never by any chance gaining, except from accidental good fortune. In fact, to become a successful investor, one must possess knowledge, judgment, nerve, and money. Knowledge is the product of study; judgment is a natural gift, assisted by knowledge, and, indeed, impossible without study; nerve is also a natural gift, but that, too, may be cultivated by the abstinence of excess, and by moderation in all indulgences; the possession of money may be accidental, or it may have been earned by the possessor, but, taken in the long run, money belongs to the man who has the power and the will to grasp and to retain.

The chief mediums open to the public for the investment of capital are home industries, such as in the quarries, buildings, shipping, gas and water works, railways, banks, insurance, and miscellaneous. From the two first 25 to 50 per cent. can readily be obtained with the exercise of judgment and ordinary caution; the two next should pay from 10 to 15 per cent.; while the three following pay the investor only from 5 to 7 per cent. In the last class, miscellaneous, from 10 to 20 per cent. can be obtained, but as the number is legion open for appraisal, space precludes us from entering more fully into details. Still, investors can obtain every information upon application, either per post or personally; in the latter case, daily consultations can be obtained gratuitously, between the hours of 12 and 3 o'clock.

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II.—CABINET with 60 drawers, containing 2600 species of Fossils, represented by 4500 specimens, stratigraphically arranged. This Collection, with the Collection of Minerals No. I., would form an instructive Geological Museum for a nobleman or country gentleman.

III.—TWO CABINETS, each containing 20 drawers, with upwards of 2500 Minerals, Rocks and Fossils. This Collection is well adapted for a first class Educational Establishment.

IV.—FIRST CLASS GEOLOGICAL COLLECTION OF TWO CABINETS, each measuring 9 ft. 3 in. long, 2 ft. 4 in. wide, and 3 ft. 10 in. high; each containing 45 drawers, with a glass case on the top of each cabinet, 4 ft. 11 in. high, and 15 in. from back to front. One Cabinet is filled with 2500 Minerals and Rocks, the other with 3400 Fossils, British and Foreign, stratigraphically arranged.

The Collection is carefully named, and consists of 6000 specimens, many very choice, and selected principally from the Duke of Buckingham's (Stowe sale), Marquisess of Hastings, Sir John St. Aubyn's, Drs. Buckland, Bowerbank, Mantell, and other celebrated collections. The first Gold Nugget received from Australia and a Gold Nugget from Ashantee, weight 5 oz., is in the collection; also a fine series of Diamonds, illustrating crystalline form and colour, from India, Brazil, South Africa, and Australia.

Any person wishing to become practically acquainted with the interesting and important study of Mineralogy and Geology will find this a good opportunity to obtain an instructive and valuable Geological Museum, scientifically arranged, the specimens having been collected with care and at great expense during the last 25 years. Price £200.

V.—MARIAGANY CABINET with 24 drawers, containing upwards of 1000 specimens of Minerals, Rocks, and Fossils in good condition and recently arranged. Price 150 guineas.

VI.—Mr. TENNANT expects shortly to have ready for sale a choice and extensive collection of RECENT SHELLS, MINERALS, ROCKS, and FOSSILS, in a large and well-made Cabinet of 108 drawers, with glass Bookcase on top. The Cabinet was the property of the late Mrs. Mawe, and contains her private collection of Recent Shells and Minerals. Amongst the latter are some Crystals of Gold, figured in Mawe's Travels in Peru, and supposed to be unique. The Bookcase contains many of the recent works on Geology by Buckland, Lyell, Mantell, Murchison, Phillips, and others, and 26 Volumes of the publication of the Palaeontographical Society, &c.

JAMES TENNANT, Mineralogist (by appointment) to Her Majesty,

June, 1874. 149, STRAND, LONDON, W.C.

### THE SOUTH TREBURGETT SILVER-LEAD MINING COMPANY (LIMITED).

Capital £24,000, in 12,000 shares of £2 each.

10s. per share to be paid on application, and 10s. per share on allotment, and the balance in calls of 5s. per share as and when required, at intervals of not less than three months.

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This company has been incorporated to purchase and work four mining leases at one-fiftieth royalty. These grants comprise a large extent of mineral ground, adjoining on the South and being a continuation of the rich Old Treburgett Silver-Lead Mine.

The lodes in this extensive and valuable mining property produce rich silver-lead—a distinct silver ore (polytellite), antimony, and sphatose iron ore. The lodes have only been worked by a deep adit level driven from the valley, but from which large returns of the above ores have been made. It is now proposed to erect a suitable steam-engine, and develop the lodes in depth by following down the ore worked away above the adit level, when, judging from the extent of these workings and the wealth of the same silver-lead lode in the Old Treburgett Mine, there is every prospect of a similar success in this undertaking.

A prominent feature in this property is that the company is not dependent upon one class of mineral. The sett is very extensive, and contains several valuable lodes, viz.:

1. A lode producing a distinct silver ore (polytellite), a specimen of which gave, on assay by Mr. Claudet, a produce of 449 ozs. of silver to the ton; copper 9.10 per cent.; gold 16 dwts. to the ton.

2. The powerful silver-lead bearing lode, supposed to be the same as that now being worked in the Old Treburgett Mine.

3. Antimony ore also highly antiferrous.

4. A sphatose carbonate of iron ore, which when calcined is especially adapted for making spiegel-eisen, used in making Bessemer's steel. This ore exists in large quantity—in places from 5 to 7 ft. wide.

The lodes, as will be seen from the reports, are traversed by cross courses which is considered a valuable feature in successful mining operations, as they universally cause a deposit of ore in the lodes with which they come in contact. This is practically illustrated in the adjoining mine, where all its wealth of mineral is deposited between two cross-courses.

While the steam engine is being erected the lodes will be worked by continuing the deep adit level, and returns of ore will be made therefrom forthwith.

The directors invite special attention to the reports of the mining authorities who have inspected the property.

Prospectuses and all information may be obtained at the offices of the company.

ABRIDGED PROSPECTUS.

### THE WIGGINTON HALL COLLIERY COMPANY (LIMITED).

Incorporated under the Companies Act of 1862 and 1867.

Capital £30,000, in 6000 shares of £5 each, payable as follows:—  
£1 on application; £2 on allotment;

And the balance in instalments of £1 per share (if required) at intervals of not less than three months.

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JOHN T. EVANS, Esq., Beech Mount, Fairfield, Liverpool.

EDWARD FORSHAW, Esq., Basford Villa, Basford, Newcastle-under-Lyne.

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the Earl Granville, K.G.

SECRETARY (pro tem.)—Mr. F. A. RICHMOND.

OFFICES.—BANK BUILDINGS, CASTLE STREET, LIVERPOOL.

This company is formed for the purpose of purchasing and working the valuable seams of coal and beds of marl and fire-clay contained in the Wigginton Hall freehold estate, situated in the parish of St. Martin's, near the market towns of Ellesmere and Oswestry, in the county of Salop, and close to Chirk Station on the Great Western Railway.

The property contains about 42 acres surface measurement in a ring fence, on which stands a farm house and buildings, as well as a quantity of timber. The colliery has been surveyed and reported upon by several mining engineers of repute, amongst others Mr. Wynne, of Stoke-on-Trent, North Staffordshire, who states that the seams of coal in the estate correspond with those of the Denbighshire coal field, thus proving the great value of the estate as a mineral property.

Besides the valuable seams of coal, there is in the estate a bed of marl 24 feet in thickness, underlying the whole of the surface and underneath a bed of fire-clay. There are no less than ten seams of workable coal, of an estimated total of 59 to 53 feet in thickness. The top or yard coal is within 24 feet from surface, from which seam alone it is calculated 600 tons per week can be raised on the expiration of six months, at a profit at present reduced prices of 8s. per ton, which will show a net profit of £240 per week. Taking a lower estimate, and allowing sufficient margin for a further reduction in price of coal, and fixing the profit at 5s. per ton only, there will then remain an annual profit of £8500, or equal to about 28 1/3 per cent. upon the whole of the capital of the company, from the one seam of coal. The entire seams are calculated to produce over 3,000,000 tons.

Mr. J. H. LAKE, mining engineer, St. Helen's, Lancashire, says:—"Judging from the Yard Mine sunk to its estate (of which I send a section), showing the Marland fire-clay, coupled with the mines now worked at adjoining collieries at no great distance, I am of opinion there exists in this estate the majority of, if not all, the coals proved in the Ruabon district. The coal is well adapted for steam and household purposes.

A colliery might in the course of the next six months be established at no great cost; and I would advise that a pair of pits be sunk on the extreme south-east point of the estate, to the Yard Mine, and of which alone upwards of 200,000 tons of coal could be raised, as well as a large quantity of clay for the manufacture of bricks.

The total thickness of the mines workable in the estate is from 52 to 53 ft., which should yield between 3,000,000 and 4,000,000 tons of coal."

Mr. R. H. WYNN writes:—"I found, close to the north-western boundary of the estate, a shaft about 5 yards in depth, and on descending it I found it to be down to a seam of excellent coal, about 5 ft. in thickness. On comparing the section with those of other collieries in the neighbourhood, it appears to me that this seam corresponds with the Yard coal of the Denbighshire coal field—thus proving the great value of this estate as a mineral property.

In the course of a few months a very valuable colliery may be opened by sinking two shafts near to the eastern boundary of the estate, for the depth would not, I believe, exceed 40 yards to the above-mentioned seam of coal."

The directors would call attention to the great advantage attending the securing the freehold, as there will be no heavy rates in the shape of royalty dues, and this in itself will be a source of profit, seeing that so small a royalty as 3d. per ton would amount to considerably more than the whole of the capital of the company.

It is well known there are no investments which offer to capitalists larger interest, with almost absolute safety, than carefully managed coal and iron companies; and it will be seen, from the following list of notable examples of successful working of colliery undertakings, how very remuneratively capital may be employed in this class of investment.

Great Western Colliery has in two years paid 160 per cent. upon capital employed, and its shares quoted at 150 per cent. market premium.

Rhonda Merthyr Collieries' last dividend was at the rate of 37 per cent.

The South Wales Company's last dividend, 35 per cent.

The Crown Company, 30 per cent., and its shares also standing at 30 per cent. premium.

Swansea Bituminous Coal Company, 20 per cent.

The Monkland Coal Company, 20 per cent.

The Silestone Fall Company, 25 per cent.

The Denbigh Company, 25 per cent.

The Staveley Company, 25 per cent.

The directors feel they are justified in believing this company will not form an exception to the examples above quoted, and congratulate themselves and the company on having secured the services of Mr. Robert Jones, certificated underground manager for the last seven years at Shelton Colliery, for the Right Hon. Earl Granville, K.G. Mr. R. Jones corroborates the reports of Mr. R. H. Wynne and Mr. Lake, supporting their opinion as to the value of the property, and calculates the cost of getting coal to surface and delivering at wharf will not exceed

5s. 6d. per ton, and that in six months from commencement of operation

be able to turn out from 700 to 800 tons per week.

Under these favourable circumstances, the property being freehold, and containing seams of coal of an estimated total thickness of from 52 to 53 ft., yielding from 3,000,000 to 4,000,000 tons, and also the valuable beds of marl and fire-clay, the directors feel it is unnecessary to offer any special, or what is now a somewhat common inducement, of a guaranteed dividend for so many years, but trust solely to the merits of the undertaking, in which they have such confidence as to induce them to invest largely, they and their friends taking up 1440 shares out of the proposed 6000, leaving 4560 for public subscription.

Copies of the contract, dated the 27th day of April, 1874, between George Thomas Read of the one part, and Frederick Augustus Richmond on behalf of company, together with the Memorandum and Articles of Association, with engineers' reports, and plans of the estate, can be seen at the offices of the company and of the solicitor.

If no allotment be made, the application money will be returned in full. Forms of applications can be had from the bankers, solicitors, or at the offices of the company.

### THE WIGGINTON HALL COLLIERY COMPANY (LIMITED).

Notice is hereby given, that the LIST OF APPLICATIONS for SHARES in this company will be CLOSED on SATURDAY, June 13, Liverpool, June 8.

By Order.

SUBSCRIPTION FOR £30,000

PERPETUAL FIVE PER CENT. FIRST DEBENTURE STOCK, A portion of £400,000 authorised, the whole being THE FIRST MORTGAGE CHARGE UPON THE ENTIRE UNDERTAKING

OF THE EAST AND WEST JUNCTION RAILWAY COMPANY

(TOWCESTER TO STRATFORD-ON-AVON)

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Forming (as explained below) Junctions with the LONDON AND NORTH-WESTERN, GREAT WESTERN, AND MIDLAND SYSTEMS.

The remainder of the authorised loan and share capital (both of which have been issued and paid up) amounts to £500,000, of which interest and dividends are payable only after the interest on the first Debenture Stock has been paid.

The stock now for subscription is offered at 98s for each £100 certificate. It will be placed in the names of subscribers free of expense for any amount, not being less than £100, payment being made as follows:—

£10 on each £100 stock applied for on application.

30 " " " " on allotment.

30 " " " " on 1st August, 1874.

28 " " " " on 1st September, 1874.

£98

The interest, which is payable half-yearly on the 1st January and 1st July in every year, will accrue on the full amount of stock subscribed for, as from the 1st day of July next.

Subscribers may, however, pay up in full on allotment, in which case they will receive the accruing half-year's interest, payable on first day of July next, which will be equivalent to a bonus of six months' interest.

Provisional certificates, in respect of the subscriptions payable by instalments, will be issued in exchange for the bankers' receipts, on payment of the amount payable on allotment, and when the instalments are fully paid-up, the definitive stock certificates of the company will be issued in respect of the subscribers.

Definitive stock certificates will be issued in respect of the subscriptions payable in full on application and allotment, in exchange for the bankers' receipts, on payment of the balance of subscription payable on allotment.

As a guarantee for the due and punctual payment of interest for two years, until the 1st of July, 1875 (thus allowing ample time for the development of the resources of the line), the whole of the interest payable during that period on the stock now offered for subscription has been deposited with Messrs. Smith, Payne, and Smith, bankers, 1, Lombard-street, in the names of

ERIC CARRINGTON SMITH, Esq., 1, Lombard-street, London (Messrs. Smith, Payne, and Smith, bankers); and

JAMES ATKINSON LONGRIDGE, Esq., London (the Chairman of the company), as trustees on behalf of the subscribers.

Applications, on the enclosed form, accompanied by the payment of £10 on each £100 stock applied for, will be received by Messrs. Smith, Payne, and Smith, 1, Lombard-street, London, F.C.; and by J. L. Dalley, Esq., brokers, 72, Old Broad-street, London, E.C., from whom prospectuses and forms of application may be had.

THE DIRECTORS AND OFFICERS OF

THE EAST AND WEST JUNCTION RAILWAY COMPANY

ARE:

DIRECTORS.

JAMES ATKINSON LONGRIDGE, Esq., Westminster Chambers,

Victoria-street, Westminster, S.W.—CHAIRMAN.

Major DICKSON, M.P., Waldershare Park, Kent.

WILLIAM OWEN, Esq., (Chairman of the Midland Wagon Company) Clifton House, Cromwell.

GEORGE HALL, Esq., 19, Cromwell Road West, London, W.

T. HILLAS CRAMPTON, Esq., 4, Victoria-street, Westminster, S.W.

C.B. BARKER.

JAMES B. BURKE, Esq., C.E., 11, Little Queen-street, Westminster.

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Messrs. ASHURST, MORRIS AND CO., 6, Old Jewry, London, E.C.

SECRETARY—CHARLES BANKS, Esq.

OFFICES.

3, WESTMINSTER CHAMBERS, VICTORIA STREET, WESTMINSTER, S.W.

The East and West Junction Railway is a line 33 1/2 miles in length, from Worcester to Stratford-on-Avon, materially shortening the route via Blisworth, from London and the Northampton iron ore district to the South Wales coal fields. It passes through a rich agricultural and mineral district via Towcester, Blisworth, Woodford, Byfield, Fenny-Compton, and Kineton, to







reached in all probability this year, after which it is hoped that no further capital will be expended. The directors continue to be of the opinion that this is not an adventure of an ordinary character, and there is no reason to doubt that the sanguine expectations as to the future of the property will be more than realised.

[For remainder of Meetings see to-day's Supplement.]

### DOLLAR RECOVERY.

A few miles from the Lizard, Cornwall, and abutting on the grand cliffs of Halzephron, is situated the Dollar Cove, which derived its silvery title from the fact that between the years 1784 and 1794 several ships with large quantities of dollars on board, amongst others one with 10,000,000 and another with 17,000,000 are recorded as wrecked. Although the precise spots are not known, nevertheless from time to time many dollars and other treasure have been found sufficient to leave no doubt as to the precise spot where a vast amount of treasure is lying—the Dollar Cove, the natural formation of which is something in the shape of a horseshoe, with month open seaward, consequently it becomes a matter of certainty that the whole of the treasure is lying in a very small space at the bottom of the cove, embedded in sand which has been washed in from sea year by year. The Board of Trade has conceded the right to rescue this treasure on payment of a percentage on the quantity recovered and on condition that it shall be lodged in the hands of the Receiver of Wrecks at Penzance, and also that the Coast Guard officers shall be always present during the actual raising of the wreck for the protection of the Government. The Cove has been thoroughly explored and evidence of the wreck searched up at considerable expense.

The mode of operation in the future is inexpensive and easy, and consists simply in prompt action in the fine summer months, with the necessary apparatus, &c., employed by professional divers, skilled in recovering treasure from old and also recent wrecks in various parts of the world, who entertain no doubt of the success of the enterprise, and who estimate the additional expense at 1000*l*. Those of our readers who may recollect the beautiful story of "Quadrone" will remember that after years of peril and hardship, and at last recovery of the coveted treasure, the ship which brought it and the adventurers home was nearly wrecked, through internal dissension—a rock on which many a well-based enterprise has been shattered; and it is to be hoped that the founders of the Dollar Recovery scheme now in progress will exercise a wise discretion in deferring any operation until the terms of division of the immense riches, which appear certain to be saved, are clearly defined.

**SUB-WEALDEN EXPLORATION.**—Mr. Willett, the hon. secretary to this undertaking, reported on Wednesday that up to the end of last week a total depth of 967 ft. 8 in. had been attained, so that the present contract to bore 1000 ft. may be taken as virtually complete. A continuation of the work will require an immediate expenditure of 500*l*. for lining tubes, and every additional foot bored to 1500 ft. o 2000 ft. will cost at least 2*l*. Thus, to enable another 500 ft. to be bored subscriptions to the amount of 1500*l*. must be forthcoming. He reports that the Diamond Boring Company, having done the work thus far so well, and having the needful plant and appliances on the spot, are in a specially favourable position for continuing the operations. The boring continues in the Kimmeridge clay. At a depth of 883 ft. the core contained a shell of the *Arca* species, which is entirely new to science. Mr. Willett also reported that at a meeting of the central committee, after hearing and considering the financial report and statement of the progress of the work, the following resolution was moved by Sir John Hawkshaw, C.E. F.R.S., and carried unanimously: "That, as such important economic and scientific questions are awaiting their solution by the completion of this undertaking, it is most desirable that the work should be continued, and that a sub-committee be appointed to draw up a statement and an appeal for pecuniary support, and that such sub-committee consist of Prof. Ramsay, F.R.S., Director-General of the Geological Survey of England; Mr. John Evans, F.R.S., President of the Geological Society; and Mr. J. Prestwich, F.R.S., ex-President of the Geological Society." These gentlemen having consented to act, the hon. secretary solicits subscriptions, that the desired result may be attained.

**MINING IN SPAIN.**—The most important coal deposits in the province of Andalusia are known as those of the Villa Nuavo del Rio, about 50 kilometres from Seville, and they are divided into three sections—the mines of the Reunion, the mines of the Guadaluquivir Company, and the Mines of the Pedrosa Company. Excepting the first class of these mines, which are worked by the aid of French capital, the two others are exclusively directed and maintained by Spanish capitalists. Until the present time the Spanish societies have passed through such difficulties that the exploitation was not easy, and the product almost nil. The French miners have also had great obstacles to surmount, but it is mentioned that during the active period of working the mines of the Reunion gave employment to about 200 miners, and furnishing an average yield of about 14,000 tons per year. This amount would have been greatly increased had it not been for the inundation of the mines, the failure of capital, and in some cases even the absence of the means of transport. With regard to railways, &c., Spain does not offer favourable advantages to mining enterprise. As an example of this, it is stated that for the mines of the Reunion the proprietors have been obliged to transport their coal by means of asses, and it will readily be perceived that in the face of such difficulties it is not by any means easy to develop the mines to any great extent. In the other parts of the province of Seville the mineral riches are equally important. In the environs of the mines of Pedrosa there are iron mines which, if properly worked, would, it is said, yield most profitable results. In fact, this neighbourhood, generally speaking, is rich in mineral wealth. The province of Cordoba also, equally famed in this respect, possesses the coal deposits of Belnez. Researches made by French and Spanish engineers have proved this to be a very rich deposit, which, doubtless, will be profitably worked. More than 10 companies, in fact, are already working the deposits of this basin, though the chief business seems to be done by two leading companies, one French and the other Spanish. These companies produce annually a very large quantity of coal. It is also worthy of notice that these companies will produce still more largely when one of their contracts with the Madrid Saragossa Company shall have lapsed, as then their products will have a wider market, and will be able to compete advantageously with the English coal, which so far has been master of the position. The coal produced in the province of Cordoba is described as of excellent quality, burning very well. The production of the two companies of which we have spoken is valued at 200,000 tons. The same part of the province also contains iron of a good quality. Many mines are also worked by English companies, and by means of English capital. Generally speaking, with regard to mining in Spain, it is beyond doubt that if the political situation of the country could become a little more settled, and less intestine disturbances prevailed, the mining business would be carried on more satisfactorily, and greater development would possibly be the result.

**UTILISATION OF WOLFRAM.**—We are informed that the patent lately obtained by the Rev. Dr. Jones for preventing the ignition or inflammability of timber is likely to be a confirmed success, and has attracted the attention of the Admiralty authorities, under whose directions a number of experiments have been made lately at the Devonport Dockyard under the supervision of Admiral Sir W. Hall, and a staff of naval captains and others. A third trial is yet to be carried out, but a very favourable opinion is already entertained of the efficacy of the invention, the value of which will be of the greatest importance, not only for shipping purposes, but for buildings generally. We are further informed that the principal ingredient which enters into the composition of the injecting solution is wolfram (utilised in tungstate of soda), and this article, which is rare and very scarce, is found rather abundantly in East Pool Mine in one or more of the levels, and has been the cause for a long time by its presence of depreciating the value of the tin, with which it becomes associated. There is now, however, a great chance of its being beneficially appropriated with considerable advantage to the shareholders for a length of time, and as the levels in which it is found are running into Wheal Agur eastward, this mine may be also expected by-and-by to participate in the advantage of Dr. Jones's invention.

**SOUTH CARN BREA.**—This mine continues to open out well. They have gone over a course of tin in the 150 and for 30 fms. in length of great value, which enables them to return 4 tons of tin per week; and within the last few days they have got a great improvement in the 164 east for copper: leader about 18 in. w.f.e., and daily improving. Other points are also looking well, so that at the end of the quarter they will have something like 800*l*. to 1000*l*. profit.

**DEATH OF MR. CHARLES CARKEET.**—We have to record the death of Mr. Charles Carkeet, the manager of Carzise, Wheal Osborne, Tucker's Downs, Wheal Pevor, and other mines (formerly of the Seven Stars Inn, Truro).

**CORNISH MINE SHARE MARKET.**—There is nothing very noteworthy to report in the share market during the week. After our last report the market became very active, and prices advanced; but as soon as the result of the Banca sale on Friday became known, in consequence of the sale not having gone off exactly so well as was hoped, the share market assumed a quiet tone, prices became rather easier, and buyers held back for the time, many fearing a reduction in the standards; but, contrary to expectation, tin has continued firm, and has had an upward tendency, even Banca having realised since the sale 101*l*. The result of this is that the share market, in sympathy with the advance in tin, has again become more lively; all good tin stock appears very scarce, and is in better demand at advancing prices, and generally a better feeling prevails the market. The following are the closing prices:—Carn Brea, after the Banca sale, immediately became weaker, but are now firmer at 60 to 65. Cargill, called, 2 to 2½. Cook's Kitchens, 9½ to 10½, not much doing. Dolcoath, 47 to 49; these shares have also become firmer within the past day or two. East Lovell, 12 to 13, but we

have heard of no transactions. A better demand has sprung up for Providence, at 2½ to 3½. Rosewell Hills, 7s. 6d. to 10s. 6d. South Carn Brea have improved to 3½ to 3¾. South Condurow, 3½ to 4. South Crofty not much dealt in at 16 to 18. South Frances, 12 to 1½, steady. St. Ives Consols, 11 to 12. Tinoroff firmer at 20½ to 31½. A moderate business has been done in West Basset at 10½ to 11. West Frances, 13½ to 14; the mine continues to look well, and shares are still in good demand. West Seton, 27 to 29, quiet. West Tolgus improved to 52 to 54. Wheal Basset are called 25 to 30. Wheal Kitty (St. Agnes), 8 to 8½. Wheal Uny, 2½ to 3½. East Pool shares more enquired for at 10 to 11.—*West Briton*.

### MIDLAND RAILWAY.

#### INTRODUCTION OF PULLMAN CAR TRAINS.

ON AND AFTER MONDAY, JUNE 1st, a TRAIN of the celebrated AMERICAN PULLMAN DRAWING ROOM AND SLEEPING CARS will be run by the Midland Railway Company between LONDON (St. Pancras Station) and BRADFORD, on week days only, calling at

BEDFORD,  
LEICESTER,  
TRENT,  
DERBY.

CHESTERFIELD,  
SHEFFIELD,  
AND  
LEEDS.

The Up Train will leave Bradford at 8-30 A.M., and the Down Train will leave St. Pancras at 12-00 midnight.

A Train will leave Nottingham for Trent at 10-55 A.M., to join the Up Train, and at 2-40 A.M., to join the Down Train, returning from Trent to Nottingham with passengers out of each Train immediately on arrival.

The Trains will convey First, Second, and Third-class Passengers at ordinary rates, and First-class Passengers may avail themselves of the Pullman Drawing Room and Sleeping Cars, at a small additional charge, particulars of which may be ascertained at any of the Stations. JAMES ALLPORT, General Manager.

Derby, May, 1874.

### GLASGOW AND THE HIGHLANDS.

**ROYAL ROUTE, VIA CRINAN AND CALEDONIAN CANALS.**  
By Royal Mail steamer IONA, from GLASGOW at 7 A.M., and from GREENOCK at 9 A.M., conveying passengers for OBAN daily; FORT WILLIAM and INVERNESS every Monday, Wednesday, and Friday.

For sailings to GAIRLOCH, ROSS-SHIRE (for Loch Maree), STAFFA, IONA, GLENCOE, MULL, SKYE, LEWIS, and WEST HIGHLANDS, see bill with Map and Tourist Fares, free, at Messrs. CHATTO and WINDY, Publishers, 74, Piccadilly, London; or by post on application to DAVID HUTCHESON and Co., 119, Hope street, Glasgow.

### IN LIQUIDATION.

**THE GWYDYR PARK CONSOLIDATED LEAD MINING COMPANY (LIMITED).**

**TENDERS** are invited for the LEASE, PLANT, MACHINERY, &c., of the above company.

The property is considered one of the best mining speculations in the Lead Mining District of Lancashire, and is situated within two miles of the Lianwest Station of the Conway and Betsy y Coed Railway. It is held by lease for 21 years from 1873, at a dead rent of £20 per annum, emerging into a royalty of 1-12th of the produce. There is on the mine a portable steam-engine for drawing a 24 ft. water-wheel for pumping, with pumps, winding gear complete. Also ore-crusher, dressing floors, smith's shop, &c., with a quantity of rails laid down in the levels and to spare, shovels, smiths' and miners' tools, &c., such as are necessary in a mine of this kind.

A shaft has been sunk to a depth of 25 fms. below the adit level, or 45 fms. from surface, and levels on the two lowest levels, from which many hundred tons of ore have been returned, and the bottom level holds out a good prospect for future returns; in fact, the hole never looked so well, and it is entirely owing to the capital of the company being exhausted that it is now in liquidation, and offered for sale.

The mine can be inspected, and the lease and specimens of the ore seen, by applying to the liquidators at St. Michael's House, St. Michael's-alley, Cornhill, London.

Tenders to be sent to the liquidators on or before Tuesday, June 30, 1874, but they do not bind themselves to accept the highest or any tender.

J. CRICKHANK, Liquidators.

J. H. HITCHINS, Liquidators.

### TIN MINE.

**SYNDICATE WANTED** for an EXTENSIVE and most valuable MINING PROPERTY, in a district proverbially rich for metallic ores. The adjoining mines (several of the lodes of which pass through this property) have realised profits amounting to between one and two millions sterling.

Address, "Tin Mine," MINING JOURNAL Office, 26, Fleet-street, London.

### DOLLAR RECOVERY SYNDICATE.

A FEW GENTLEMEN may JOIN for RECOVERY of SPECIE from WRECK at DOLLAR COVE, near LIZARD, CORNWALL.

Particulars on application to Mr. JOHN TOY, Helston, Cornwall; or to Captain BOTTOMLEY, Steamship Broker, 62, Gracechurch-street, London, where photographs of the Dollar Cove and specimens of the dollars recovered can be seen.

### NATIONAL PROVINCIAL BANK OF ENGLAND.

112, Bishopsgate-street, London, June 2nd, 1874.

The Directors of the National Provincial Bank of England hereby give notice that a HALF-YEARLY DIVIDEND, at the rate of EIGHT PER CENT. PER ANNUM, and a HALF-YEARLY BONUS OF NINE PER CENT. will be PAYABLE on the Company's Stock on and after the 8th day of July next, when the dividend and bonus warrants may be obtained at the company's office, No. 112, Bishopsgate-street, (corner of Threadneedle-street), or at the different branches.

The Transfer-Books will be closed on and after Saturday, the 6th inst., until the dividend and bonus become payable.

By order of the Court of Directors,

EDWARD ATKINSON, Joint

W. HOLT, General Managers.

### PONTGIBAUD SILVER-LEAD MINING AND SMELTING COMPANY.

Notice is hereby given, that an "A COMPTE" or INSTALLMENT of TWENTY-FIVE FRANCS PER SHARE, on account of the DIVIDEND for the year 1873-1874, is to be PAID on the 5th day of June instant. This "à compte" will be paid at the office of the company, No. 15, Rue de Chateaudun, Paris, or at the London Agency, No. 11, Queen-street-place, on presentation of the Share Certificates with the thirtieth dividend coupon not detached, which will be stamped.

Suffice to say, that the dividend, by exchange, be at the rate of 19s. 6d. per coupon (less income tax).

JOHN TAYLOR AND SONS.

London Agency, No. 11, Queen-street-place, E.C., 1st June, 1874.

### PREFERENCE SHARES.

**THE DIRECTORS OF THE YORKE PENINSULA MINING COMPANY (LIMITED)** are PREPARED TO RECEIVE APPLICATIONS FOR THE FIFTEEN PER CENT. GUARANTEED PREFERENCE SHARES OF the Company, created on the 28th instant.

These shares bear a fixed preferential dividend of 15 per cent. per annum, the dividend for any year to be payable out of the profits of such or any succeeding year or years. They carry, further, the right to an equal pro rata participation with the holders of the ordinary shares of the company in profits remaining after payment of the said fixed preferential dividend, and the par value of the shares, as well as any arrears of the preferential dividend that may accrue, are repayable out of the entire assets of the company in preference and priority to any distribution of the realised value of such assets to the holders of the ordinary shares of the company.

The shares are of £1 sterling each, 5s. per share payable on allotment.

Further particulars, and forms of application, if desired, may be obtained at the office of the company, No. 1 King's Arms-yard, Moorgate street, London.

By order of the Directors,

20th May, 1874. C. GRAINGER, Secretary.

### HARLAND AND CO. STOCK AND SHARE DEALERS,

255 and 256, GRESHAM HOUSE, LONDON, E.C.

Transact business in every description of Stocks and Shares at net prices, and recommend investment in—Chapel House, Alltarn, Cardiff and Swansea, Welsh Freehold, United Bituminous, and Cleef Hill Collieries—Tylwydd, Bog, Denbighshire, West Tankerville, Tankerville, Lovell, Roman Gravel, Sweetland Creek, and Birdseye Creek.

Circular and Daily Price-List gratis.

Bankers: London and County Bank.

### MESSRS. J. TAYLOR AND CO., 86, LONDON WALL, E.C.

AND MINING EXCHANGE, SOUTH KING STREET, MANCHESTER.

Business done in all descriptions of Stocks and Shares.

### MR. J. HODGE, having had thirty-five years' PRACTICAL

MINING, offers his ADVICE to CAPITALISTS, INTENDING PURCHASERS, or SELLERS.

15, ALBERT ROAD, PLYMOUTH.

### GROSVENOR, ENTWISLE, AND CO.

(LATE GROSVENOR AND CO.)

STOCK AND SHARE BROKERS

85, PORTLAND STREET, MANCHESTER.

### MESSRS. CAMERON AND CO., FINANCIAL AGENTS

AND SHARE BROKERS,

BRIDGE STREET CHAMBERS, CHESTER.

**CHALLENGE.**—I was rather surprised at the crudelity of the correspondent to the "Mining World" of last week's issue, and am sorry for the apparent annoyance that he must have suffered from the multiplicity of circulars arriving at the address of so great a personage. My Lord Diddlum is no doubt largely interested in other shares which he is desirous of ridding himself (the old dodge of moving the venue by depreciating valuable shares in order to palm off valueless ones). I am open to challenge or bet the author of that paragraph or Messrs. Mining World and Co. (or Messrs. Harland and Co.) £50 to £25, and post the money, that the Bampfylde Company shall pay back to the shareholders the present purchase-money, £5 5s. or more, out of the true sales of ore before the Tylwydd, Melindur Valley, or Grosvenor shall pay a dividend of 10s., proved by the profits of the sales of ore. What is the use of these people depreciating valuable properties, unless they mean palming off something?

The following are the closing prices:—Carn Brea, after the Banca sale, immediately became weaker, but are now firmer at 60 to 65. Cargill, called, 2 to 2½. Cook's Kitchens, 9½ to 10½, not much doing. Dolcoath, 47 to 49; these shares have also become firmer within the past day or two. East Lovell, 12 to 13, but we

### VAN NOSTRAND'S SCIENCE SERIES—THEORY OF ARCHES.

As standard works of reference upon matters connected with civil engineering the manuals of the late Prof. Rankine are probably unsurpassed, but they are excessively bulky, and in many parts too elaborate to be readily available to practical men who have not been regularly prepared by long previous training to read them; whilst leading facts stated with regard to a particular branch of the profession, such as the construction of girders, the building of a roof, or the making of a railway, is almost out of the question. For this reason such treatises as that of Prof. Allan, on the "Theory of Arches," which forms the last published volume of Van Nostrand's science series, will prove invaluable to a large number of readers. The book is precisely what it professes to be—an amplification and explanation of Prof. Rankine's chapters on the subject, and from the simple and lucid style in which the explanations are given the study of it will give a very clear insight into the particular subject treated of, and at the same time facilitate his ready comprehension of other branches of technical engineering science which Rankine and similar writers have dealt with.

To enable the reader the better to appreciate the nature of the forces which he will have to take into account, Prof. Allan begins with the consideration of those which act upon a suspended chain or cord, remarking that the force in the chain or cord is just the opposite of that upon an arch—that is, it is tension instead of compression; but that the relations between the external and internal forces, or what is the same, between the loads and the resistances they produce, are strictly analogous. It is explained that a cord without stiffness cannot exert a pull, except in the direction of its length, so that in the case of a rope suspended by a pull, except in the direction of the tangents. He then goes on to show how the resultant of the forces represented in the pull may be found, and their nature—leading the reader on to the calculation of the pulls at all points of the cord. He is thus enabled to investigate the various cases which a cord will assume under different distributions of the load—first dealing with loads which are parallel and altogether vertical, and then with loads varying in direction. Having thus given a thorough knowledge of the forces which may act upon a curve—and this knowledge will have been acquired the more easily because he has been required merely to consider the curve under its most simple conditions—his attention is directed to the most elementary form which it may be imagined when the curve of the cord is reversed. The curve is supposed to be reversed and the cord itself to be replaced by a thin metal strip, which, like the cord, shall be practically without transverse stiffness, but, unlike the cord, will be able to resist a compressive force in the direction of its length at every point; and by the discussion of linear arches the reader is taught how to determine the form of equilibrium for real arches, for if, as Prof. Allan remarks, we know the form that a linear arch would assume under a given load we can find the line of pressures on the real arch. This line and the value of the thrusts at its points enable us to solve the problems that arise in arch building. Various cases likely to occur in practice are then considered, and the necessary details given for guiding the reader to the most approved methods of dealing with them.

The work is profusely illustrated with diagrams, so that misapprehension of any of the statements made is almost impossible. The workmanship displayed in the printing of the book and engraving of the illustrations is excellent, and from the utility and conciseness of the information given the volume will certainly long enjoy a prominent position amongst elementary technical manuals.

"Theory of Arches." By Prof. W. ALLAN, formerly of Washington and Lee University; Lexington, Va., U.S. New York: D. Van Nostrand, Murray and Warren Streets.

**KILLAN AND THREE CROSSES COLLIERY.**—The works at these collieries are now in a most satisfactory position. At Killan Colliery the workings are sufficiently opened to produce an output of some 50 tons per day, and as several levels are opened east and west in the solid coal the output can be readily increased; the seam opened produces splendid house coal and cuts very large, the seam being nearly 5 ft. thick. The completion of tramway between the pits and the incline to the company's siding on the railway is nearly finished. When this is done, and the colliers return to their work, there is little doubt that even at lowest price the profits will be very good; and, as capital is small, the shareholders will probably receive dividends of some 30 per cent. The contract for opening the Three Crosses Colliery is completed, and an immediate output could be made. The coal is of very fine quality, three-fourths being large. The colliery is well opened, with sufficient pumping apparatus, and the gradual increase of output is only a question of labour. The company have, by the terms of the contract, had the whole of the opening made and the present satisfactory position obtained for the sum of 500*l*., whilst it has cost the contractor over 1200*l*. in labour; the difference, therefore, is a clear gain to the company. From the two collieries it is confidently expected that an output of over 100 tons per day will be sent on the company's line in course of very few months, and it only requires the levels and headings to be extended to bring up the output to 200 to 300 tons per day.

**ARTIFICIAL FUEL.**—Mr. W. CLARK, of Plumstead, engineer, in the specification of his patent for improvements in the construction of machinery for moulding and compressing artificial fuel and other substances, says:—A bed plate is fixed on standards, in or to which are fixed bearings for a drawing shaft furnished at one end with driving pulleys and fly wheel, and at the other end with a toothed pinion gearing into a large wheel by which motion is given to four pressing rollers or mould wheels arranged above. Two of the latter are fixed on long shafts which run parallel with the bed plate, and are geared together at one end with two spur wheels, having an equal number of teeth. On each side of the two last mentioned rollers or wheels are placed two other pressing rollers or wheels of the same dimensions, one on each side, and which are respectively fixed on short shafts set at right angles to each other, and which are connected by strong mitre wheels to the longer shafts previously mentioned. On the outer end of one of the said longer shafts is fixed the large driving wheel which gears into the pinion on the driving shaft. The outer edges of the pressing rollers or mould wheels are made of a A shape, and set at an angle so as to fit closely together when brought into juxtaposition, and are respectively provided with an equal number of hollow spaces or cavities round their surfaces, each space or cavity forming a quarter of a sphere, and which meet together during the revolution of the rollers or wheels which revolve in the same direction and at the same speed. A purifying mill provided with a shaft having suitable blades is placed above the rollers or wheels, and into which mill the substance under treatment is admitted. Openings are provided in the bottom of the mill opposite each of the rollers or wheels, and upon the machinery being set in motion the substance is forced downwards by the rotating blades on to the top of the rollers or wheels, each of which takes a portion thereof, the same being quickly drawn to that part which the rollers or wheels meet, and is there forced into the form of balls, receiving in greatest pressure on passing the centre line of the rollers or wheels. After passing the centre line the rollers or wheels are turning in opposite directions, causing the moulds to open on the lower side and allow the balls to fall into a trough or on to an endless band by which they are carried away.

**INCrustation IN STEAM BOILERS.**—Mr. VAUGHAN, F.C.S., of Chancery-lane, patent agent, has patented (for Isaac Bernhard, of Paris) an improved preparation for the prevention or disintegration of solid deposits or incrustations in steam-boilers, which consists in the production of an anti-incrustation preparation for steam-boilers, the same being composed of animal gelatin dissolved in water, with glue or other animal gelatine, supplemented by a small proportion of phenol or other antiseptic.

### COPPER ORES.

Sampled May 20, and sold at Tabb's Hotel, Redruth, June 8.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
West Tolgus	91	£5 17 0	West Seton	48	£4 18 0
ditto	77	5 17 0	ditto	44	4 18 0
ditto	75	5 19 6	ditto	44	4 17 0
ditto	74	5 13 0	ditto	30	3 17 0
ditto	71	5 13 0	South Crofty	84	3 17 0
ditto	68	9 17 6	ditto	34	3 15 0
ditto	60	4 16 0	ditto	29	3 10 0
ditto	55	10 5 6	St. Aubyn United	50	4 19 0
ditto	50	3 14 6	ditto	38	6 8 6
Crenver and Abraham	71	4 0 0	East Pool	57	2 8 6
ditto	67	3 16 0	Wheal Basset	32	4 17 0
ditto	64	3 17 6	ditto	18	12 0 0
ditto	59	8 11 0	South Dolcoath	37	2 12 6
ditto	51	2 9 6	ditto	15	6 8 6
ditto	49	4 0 0	West Basset	27	6 12 6
ditto	44	8 0 0	East Seton	27	3 0 0
ditto	38	6 12 0	Williams's Ore	12	3 0 0
ditto	35	6 4 6	Wheal Comfort	5	3 1 6
ditto	28	6 0 0	Providence	4	7 10 0

TOTAL PRODUCE.	
West Tolgus	616
Crenver & Abra.	506
West Seton	159
South Crofty	108
St. Aubyn United	88
East Pool	57
Wheal Basset	50

AVERAGE PRICE PER TON.	
Average price per ton	£101 14 0
Quantity of ore	1731
Amount of money	£2295 13 6
LAST SALE.—Average standard	
Standard of corresponding sale last month, & 99 12 0—Produce, 7.	£103 14 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.	
Names.	Tons.
Vivian and Sons	296
P. Grenfell and Sons	207
Nevill, Drue, and Co.	220
Mason and Elkington	263
Copper Miners' Company	106
Charles Lambert	157
Newton, Keates, and Co.	172
Sweetland, Tuttle, and Co.	210
Total	1731

NO SALE on Thursday next, June 10.



## 601

less, silver and copper ores to profit, is by causing (when they are not intimately associated by nature) low-class silver and copper to be mixed together, and the precipitation of the copper as described brings down the silver; thus, 1 per cent. copper in 1 ton of ore, and 10 ozs. of silver in another ton of ore, when treated separately, would produce 100 lbs. of silver and 1 lb. of copper, but if mixed together, and the copper and only 4 ozs. silver in 1 ton of stuff can, upon a large scale, when treated in combustion be worked. To profit. The sequel, he states, will be proved by demonstrative facts, as his invention will bring millions upon millions of pounds worth of silver and copper into commercial value, which have been known for ages to exist in their present state, but without any applied means for their profitable extraction.

IN RE THE WHEAL VYVYAN MINING COMPANY.  
COURT OF CHANCERY, LINCOLN'S INN, JUNE 4.

This was an appeal before the Lords Justices of Appeal, from a decision of the Vice-Warden of the Stannaries Court. The company was a Cornish mining company, on the Cost-looko mine. It was ordered to be wound up in February, 1879. A claim was made against the mine, for the late Mr. Charles Wesscomb, who was formerly the purser of the mine, for the amount of £1,000, which it was alleged he had received in respect of calls due from the firm of D'Arcy, one of the shareholders, and had not paid over to the company. The Vice-Warden admitted the claim, Mr. Wesscomb's executrix appealed.

Mr. W. Pearson, C., and Mr. W. W. Kinslake were for the appellant: Mr. Dickinson, Q.C., and Mr. Graham Hastings on behalf of Mr. John Divett, a contributor, supported the order of the Vice-Warden. The Kewewich appeared for the official liquidator.

Their LORDSHIPS held that there was no evidence that Mr. Wescomb had received the 28s., and nothing had occurred to stop him from saying that he had not received it. The judgment of the Vice-Warden must be reversed, and the appellant have her costs. The Court below paid out of the company's estate. No order would be made as to the costs of the appeal.

Mr. KEKEWICH submitted that, the liquidator being brought here as a respondent, he was according to the ordinary practice, as shown by "Bush's Case" ("Law Reports," 6 Chan. 205), entitled to have his costs out of the company's estate.

Their LORDSHIPS said the proper course would be to leave this matter to the discretion of the Court below, to which the liquidator could apply for his costs. It would be understood that in such cases the liquidator should have his costs, unless there was evidence to the contrary. The fact that this Court made no order as to the liquidator's costs would not prevent the Vice-Warden from giving them if he thought fit to do so.

## ECHOES FROM THE MINING MARKET

The pleasures of the Epsom carnival have exercised their accustomed influence upon stocks and shares, and the last week has been a very uneventful one as far as the mining market is concerned. There is no alteration of any importance to record. The tin market remains *in statu quo* although the better feeling noticed in our last is still apparent, whilst the other metal markets do not present any change worthy of notice. The probabilities of an early rise in tin are still believed in, and the continuance of the firm tendency we have alluded to is pointed out as argument in favour of an upward move. The result of the Banca sale, although not so good as we expected, left the market in the same position as before the sale. English and Straits were certainly quoted lower immediately after, but the price has since fully recovered.

Old Battle Hill, a mine that has been working on steadily during the late crisis, though almost lost sight of by investors for some little time, legiving signs of emerging from the gloom of neglect. Several transactions have been reported in the shares during the past few days, and the quotation, which is 13 $\frac{1}{2}$ , 24 $\frac{1}{2}$ , shows signs of hardening. We remember that some 12 mo this ago these shares were quoted as high as 15 $\frac{1}{2}$ , and it is asserted that there is a probability of a rise to something like the old price. The mine is undoubtedly a sound concern with good prospects, and as the shares are only 24 $\frac{1}{2}$  the present price should be quite a minimum one, and we are sure that the price in the 44 will be cut in a few feet more driving, where there is every prospect of a good copper discovery being made. When the lode is cut the value of the mine will be much increased. Regular sales of tin ore are already being made, and if copper production can be added there should be no doubt of the success of Old Battle Hill.

At Glakdale Quarry the engine has arrived, and will be forthwith connected with the breaker. The developments decided upon by the company have been making first rate progress, and the property will soon be capable of a large daily output of stone. The shares offer a very fair investment.

No particular change has occurred in foreign mines. The reports from Richmond continue good, the last advices showing a return of \$35,000, after seven days run. The shares have been fluctuating, and the last quotation shows a flatter market. From Emma the private advices confirm all that has been said of the property within the past two months by the independent inspectors, and those who are hostile to the late management are confident that their information can be substantiated. Which is in the right time alone can show. It has been suggested that when the new board is constituted, following the plan adopted by the Flagstaff Company, propose a contribution of 10% of the shares to be held in the name of trustees, entitling sub-scribers to certain preferential rights. By this means the company would be placed in an independent position. It is the general opinion that until it is freed from the burden of the vendor's control success is out of the question.

JAMES H. CROFT.

From Mr. ALFRED E. COOKE, 76, Old Broad-street, London.—The mining market has been steady during the week, while some of the leading stocks have advanced. The future state of the metal market is looked upon favourably, and the gradual upward tendency will further enhance the value of tin shares. Only a fortnight since I was recommending in these columns the purchase of Frines of Wales shares. They have already advanced, but even now, when they may be bought at about 11s. or 12s., they present an excellent speculation.

ought at about 18s. per ton, they present an excellent speculation, as at one time they reached 70s., and the mine now holds out prospects quite as encouraging. The quartz arrived at Glasgow, Wemyss & Co. Quarry I found operations were being pushed forward with vigour, and in such a manner as to permanently benefit the company. The site for the engine (which has arrived since) has been determined, the stone-breaker has been determined on, and all necessary work for placing them in position and erecting them is almost completed. With regard to the quarry itself, the appearance is all that can be desired. The top, or third, floor Lys ope is a face of solid whinstone, and this alone would be quite sufficient to form an ordinary property, but in future the quarry will be fully developed by working the lower floors. Altogether, there are now signs of every improvement recommended being finished, when the returns will be forthwith augmented, and success immediate. The whinstone of the quarry (samples of which may be seen at my office) is of the finest quality, and it is well adapted for macadamising roads. A few shares remain in my hands for disposal at par (20s. per share) should an early application, as important results will follow in a few weeks, and a premium will have to be paid for them. Reverting to tin mines, I would again call attention to the reports from Old Bottle Hill. The shares have been enquired for during the week, and, really, a cheaper speculation could not be selected. I advise an immediate purchase at 2s., as at the present moment the shares are honestly worth 5s.

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**MINING NOTABILIA.**  
[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

**FURZE HILL.**—This mine sold, on June 3, 5 tons 2 cwt. 3 qrs. 23 lbs. of tin, the produce of four weeks, realising 29½/ 13s. 3d., leaving a profit of 100/ 18s. 4d.

**TREWAVAS MINES.**—The surface surveys and working plans are being prepared with all possible dispatch, and will be submitted to an early meeting of the shareholders for approval.

**BURRA BURRA.**—From the agent's report it appears that there are four points of operation in which they seem to be on the verge of success—1. In the 18 east, where the lode is producing fine stones of grey copper ore of very good quality, and with indications that they are within a very few fathoms of a shoot of copper ore.—2. In the 40 east, where they are coming under the produce

live ground, which reflect a large return of copper ore in the level above, and the same amount of copper ore in the same level of ore in a short distance more driving.—3. In the cross-cut in the 30th level, the ore is the Red Works lode, which is said to be the same lode as is now yielding such splendid ore in Britain United Mines.—4. In the engine-shaft, where the lode is 10 feet wide, and improves every foot you sink, and which the agent declares to be as rich a lode of copper as he ever saw, and which is said to be the same lode as the deeper level. This and the lode in Street's shaft are spoken of in the highest terms by all who have seen them, and all that is wanted to secure success is a little more support and patience, when there is every indication that the shareholders

**TREVARRACK.**—The lode in the shaft has improved. The prospects of the mine are considered excellent, and it cannot be doubted that if the results attained are such as those reasonably expected the rise in price might ere long be very important.

**WEST GREAT YORK TIN MINE.**—It is gratifying to find this mine is now rapidly laying open tin ore ground, and in a few months will improve to such an extent as to be able to pay costs from sales of ore, even at the present low price of tin. No mine in Cornwall holds out better prospects, nor offers a greater certainty of becoming permanently profitable, than the West Great Work. The

shares are the cheapest in the county. It is in a splendid situation, as the following facts prove:—The adjoining properties, which raised and sold 4,000,000*lb.* of mineral, and paid 500,000*l.* in dividends, are as follows:—Godolphin Mine paid 900,000*l.* in dividends, and shares rose to 400*l.* each; Hallamington and Croft Gt. Hall, 80,000*l.* in dividends, shares rose to 350*l.* each; Pemberthy Crofts, 40,000*l.* in dividends; Great Wheal Voe, 90,380*l.* in dividends, rose to 40*l.* each; Retallack, 80,000*l.*

in dividends; Great Work, 140,000*l.* in dividends, shares rose to 240*l.* each. The prospects of West Great Work becoming a rich and lasting dividend concern are certain. It is an investment well worthy of attention. They are laying open a rich mine. Shares are 1*l.* each, fully paid. No further call on liability.

**TYLLWYD.**—The south lode in the cross-cut is now 10 feet wide, and they have commenced to drive west, so as to come under the stoping ground which was so rich in the adit level; the lode is yielding silver-lead ore throughout.

**MORVAH CONSOLS.**—Work here, under the immediate personal superintendence of Mr. Hammon, one of the London directors, is pushing on.

superintendence. While the miners continue to break stuff of good quality, and the lode improves as it deepens, the surface means of returning it are very nearly complete. A horse-whim has been erected, and the skip, wire rope, &c., are fixed, so that all is ready for hauling. The stamps are so far ready that a preliminary trial has been made. We believe that before the end of this week the whole of the

We notice for the first time in the list of lead sales one of 15 tons from the Ceed Mawr Pool Mine. This mine should with a small outlay return to its owners a large profit, as it is favourably situated near mines that have made, and are making, large returns, and we see no reason why it should not do the same if vigorously worked, as there seems every probability of its being under cement

management. It is in the hands of a few gentlemen, who are working it privately.

7.  $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$



## Mining Correspondence.

## BRITISH MINES.

**ABERDAUNANT.**—S. Toy, June 3: The No. 2 adit level driving east is harder than it was last week and discharging more water. The part of the lode which are carrying in driving is 6 ft. wide, with more lead standing to the north. The last 2 fms. driving has not produced any lead to value, but the lode is of a kindly appearance. The No. 4 stop over this level, and only 3 fms. behind the forebush, is worth 15¢ per cwt. for lead, and all in virgin ground going eastward and above, where we have 40 fms. back that has never been proved. In the east part of the set we have put an open cutting up through the western field of Crowlwm farm, from 4 ft. to 15 ft. deep, and 60 fms. long. We have met with several joints and small branches producing lead, but no lode of lead that will pay a profit to work on as yet. I have now put the men to open up eastern pits on the back of the large quartz lode which you inspected a fortnight since, bearing north of east, to see if it forms a junction with the Aberdaunant lode eastward.

**ASSHEVEN.**—M. D. Whitford, J. Croze, June 3: The sinking of Maur and Browne's shafts is vigorously urged on, and satisfactory progress is being made. No material change in the lode in the 40th and west since last report. The three stops in back of this level will yield in the aggregate 5 tons of lead ore per fm. The lode in the winze sinking below the 30, west of Browne's shaft, will yield from 15 to 18 cwt. of lead ore per fathom. The lode in the winze sinking below the 30, west of Maur shaft, on the south part of the lode, will yield 3 tons of lead per fathom. The stopes in back of the 30, on the south east from h, will yield from 18 to 20 cwt. of lead ore per fathom. The stopes in back of the h, west of Maur shaft, will yield from 15 to 20 tons of lead ore per fathom. We shipped on Saturday, May 30, the parcel of lead sold to Messrs Glover and Johnson, 60 tons dry weight; we shall sample another computed 50 tons on Tuesday next.

**BEDFORD UNITED.**—Wm. Phillips, June 3: In the midway east the lode is 4 ft. w. l. worth about 20¢ per fathom. The stopes under this level is still worth 40¢ per fathom. The midway west is still too big well, and is opening an important piece of ore ground; the lode in the present end is worth 5 tons of ore, or 25¢ per fathom. The lode in the 103 east is 6 ft. wide, producing a little saving work, and is more promising. In the 103 west the lode is worth about 12¢ per fathom. South lode: In the 47 east, the lode is 2 ft. wide, composed chiefly of mangle, with a little lead, and is worth 3¢ per fathom, or about sufficient to pay the cost of driving. The rise up the face of this level is 15 fms., and has been suspended for a short time, in order to commence a level at the 35, which level is in 3 fms., east and west of the rise; at each of these points the lode is of a highly promising character, composed of gossan, mangle, and a little black oxide of copper. The rise will be resumed next week, and these levels be pushed on as fast as ventilation will admit of.

**BOG.**—W. T. Harris, J. Barkell, June 3: The driving of the 175, both east and west, is progressing favourably; the west end is worth for lead 1-1/2¢ per fathom, and the east end is producing some good lead-tuff for the dressing-floors. The ground in the 165, driving east, has very much improved for progress, and the lode is yielding good lumps of lead ore. There is no alteration in the end driving in this level, on the whitestone lode. The same remark may be applied to all the other bargains and pitches throughout the mine.

**BRYNAMBOL.**—Geo. Spargo, June 3: The sinking in the 42 is progressing as fast as possible, but we have had occasional hindrances through the long drought; the lode is still of a most promising appearance. The cross cut in the 32 east is within a change worthy of remark, and is now extended from the north or hanging wall of the lode towards the south wall 3 fms. 3 ft. 4 in. I have not led this cross cut at 75 fms. per fathom, to wheel all the shaft to plat. The clearing of the 32 west is being pushed forward as fast as possible. The stopes in the back of the 32 east is not so deep as last week, but the stoping at 45¢ per fathom, I expect an improvement at any moment. The carpenters and smiths are getting on with the new jiggers, and the carriers have commenced carting the castings from the station to the mine. I shall lose no time in getting things complete. Our machinery throughout works well.

**CALCANYON.**—T. Hodge, June 2: The lode in the 70 east end is without any change worthy of notice; the part of the lode carried is 6 ft. wide, all saving for dressing. About 3 fms. behind the end we have two men engaged shooting down the south part of the lode, which is 4 ft. wide, all saving for lead. We are passing through a great deal of ore here, and I am more than ever convinced that depth only is required to meet success. We have cleared the old workings from the adit level down to the 30, and are now engaged clearing below, where the old workings are wide, which renders progress rather slow. The blende lode is looking well at all points. We sampled on Friday last 45 tons of blende, and hope to sample another rich lot in two months hence, with a small parcel of lead.

**CEFN BRWYN.**—J. Paul, June 3: I beg to hand you the following report on this mine, with pay sheet for Saturday last:—The 104 east is set, to four men, at 180s. per fathom; lode here large, containing a mixture of lead and blende, not all taken down as yet, and as soon as it is I will acquaint you of the value thereof. Two pitches were set over the 104 and 92 east, to four men in each, at 165s. per fathom; lode 4 to 6 ft. wide, yielding 10 to 18 cwt. of lead ore per fathom. A pitch over and below the 90 and 50 is set to six men, at 165s. per fathom; lode 5 to 7 ft. wide, producing 1 ton of lead ore per fathom. Surface operations are being proceeded with regularly, and fair progress making towards another sampling. Owing to the long drought our surface water will be exhausted in a few days unless we get some rain, which I hope we shall have, so as to keep all things going.

**CRENVER AND ABERAHEIM UNITED.**—Wm. Thomas, J. Hammill, B. Arthur, June 3: Start's Engine Shaft: In the rise in the back the 215, west of engine shaft, the lode is 2 1/2 ft. wide, yielding 2 tons of copper ore per fathom. St. George's Shaft: In sinking this shaft below the 205, the lode is 1 1/2 ft. wide, producing good stones of copper ore. In the winze sinking below the 203, east of shaft, the lode is 2 ft. wide, yielding 1 1/2 ton of ore per fathom. In the 203, driving east on the south lode and west of shaft, the lode is 1 1/2 ft. wide, producing copper ore to dress. In sinking Woolf's shaft below the 208, the lode is 2 feet wide, yielding 3 tons of copper ore per fm. In the 208, driving west, the lode is 2 feet wide, producing a little copper ore. Pelley's Engine Shaft: In the 234, west of shaft, the lode is 4 ft. wide, yielding copper ore in small quantities. In the winze sinking below the 234, the lode is 6 ft. wide, producing 2 tons of copper ore per fathom. In the stopes in the bottom of the 234, east of winze, the lode is 3 ft. wide, yielding 3 tons of copper ore per fathom. Blown's Shaft: In the 229, driving west, the lode is 2 1/2 ft. wide, producing copper ore to dress. Richard's Shaft: In the 170, west of shaft, the lode is not quite as well as when last reported on. We hope to get the pump ready for work in about three weeks. There are employed this week, on tubwork, 170 men and boys; on tribute, 74 men and boys; at surface, 60 men and boys—333 men and boys.

**CWM ELAN.**—W. Goldsworthy, May 20: The new mill, to be water was pumped out of the mine by Monday last according to anticipation, pumping and working has been going on regular since. The lode in the 20, west of shaft, is disordered by a cross slide, which is carrying a little lode; after cutting through the latter the end is letting out a large stream of water; the end at present is not without ore, but as soon as we get through the influence of the slide I expect the lode will come to its former if not of more value; there is every indication that it will be so. Let to two men, at 7¢ per fathom. In the same level east we have taken down the lode that was left to stand during the past month, average produce from 10 to 12 cwt. of lead and blende ore per fathom; let to drive by four men, at 6¢ 5/8 per fathom. The stopes in the back of this level is worth about 12 cwt. of lead and blende ore per fathom; let to two men, at 3¢ 15s. per fathom. The stopes in the 20, level west will produce 20 cwt. of lead and blende ore per fathom; by two men, at 4¢ per fathom. The stopes in the back of the 10 east will produce 18 cwt. of lead ore per fathom; let to two men, at 2s. 8p. per fathom.

**DE BROKE.**—T. Hodge, June 2: We continue to push on the surface work as fast as the nature of the work will admit. The 14 feet water wheel is erected, and the frame for the plunger jiggers is in its place. In taking out ground for the round buddies, &c., we have come down to soft clay, which will cause more labour than we expected. Everything shall be pushed on with the utmost dispatch possible.

**DEER PARK.**—J. Goldsworthy, J. Bucknell, May 30: The sinking of the engine shaft below the adit level is being forced on by a full party of nine men, and good progress is being made; the stratum is strongly mineralised, and the water issuing from the fissures contains copper in solution; this was regarded as a favourable indication of the lode producing rich copper ore. The balance is in its place, and will be connected as soon as the fittings are in readiness. The surface work is being forced on as usual.

**DENBIGHSHIRE CONSOLIDATED.**—J. Pryor, June 4: The 112 east continues hard, but we are drawing very near the place where, without doubt, we shall meet with the deposit of lead. The 112 west is opening out again into more favourable ground, which will facilitate our driving to the junction of the lodes. The new lode, out of the 60 west, did not produce so much ore as expected during the past month, but to day it shows great improvement. Barn Shaft: We have dropped upon the footwall of the lode, and are now opening out the same upon the underlie. Junction Shaft: This is going down very satisfactorily; almost every stone has spots and strings of ore, and without doubt these are indications of a great body of ore below. We are quite satisfied that the result of the expenditure on this portion of our property will give us substantial returns, and open up large reserves. Helena Shaft: From all appearances the lode has been intersected; the ground has become very soft, and we have met with several lumps of ore during the past few days.

**DYLIFFE.**—E. Evans, E. Rogers, June 3: Dyliffe Lode: In the 120 we are driving north, by six men, as fast as circumstances will allow; the ground is of just the same texture as in the levels in the lode. There is no alteration in the stopes in the 105, east of boundary shaft; the lode is worth 24¢ per fathom. In the 40, driving east of this shaft, the lode when last taken down was worth 18¢ per fathom. The 25 and 15, driving east of the old engine shaft, are still unproductive. The stopes in the back of these levels are just the same as when last reported on. Esgrigal Lode: In cutting through the lode in the 40 we have passed through some good stones of lead ore, but are not completely through it.

**EAST BLACK CRAIG.**—T. Cogar, J. Betty, June 3: The stopes in the back of the 108 fm. level, west of winze, are worth fully 2 tons of lead per fathom; and No. 1 cross-cut level, west of winze, is 2 ft. wide, producing a little tin. In the 120 cross-cut north the men are making fair progress. The lode in the 110 west is 2 ft. wide, and worth 7¢ per fathom. The lode in the 110 east is 2 ft. wide, and worth 8¢ per fathom; this end looks kinder than for some time past. The lode in the 95 east is 2 ft. wide, and worth 8¢ per fathom. The stopes above the 95 east is worth 12¢ per fathom. The stopes below the 85 east is worth 8¢ per fathom.

**EAST WHEAL LOVELL.**—R. Quentrell, June 3: Fatwork: The lode in the new shaft, sinking below the 100, is looking very well, and will produce 5 tons of tin per fathom for length of shaft (12 feet). The 100 west is worth 20¢ per fathom. Trogueha: We have sunk the new engine shaft to the 24 fm. level, and have just commenced driving east and west; lode worth from 12¢ to 15¢ per fathom. There is no change in any other part of the mine.

**FLORENCE CONSOLS (Tin).**—Report from the Owner: It became necessary last month to dispense with the services of Capt. Johns and the purser (Mr. James Johns), and also the clerk (Mr. Samuel Johns). The result for the past month has been a return of about double the quantity of tin, and produced at a cost of 20¢.

less than previously; and there is ample evidence to believe that the return of tin for the present month will be double that of last month. Nearly 5 tons are now ready for sale from last month. Our 28 hauls of stamps are now kept constantly at work, day and night, and twelve more will shortly be added. Some excellent courses of tin have been uncovered. The balance to be paid to merrow to 2 1/2 men (tributaries) at one setting will be 55¢ 4s. 6d. The new boiler from Harvey and Co. is fitted at Walter's shaft, and both boilers are working admirably. The new shears purchased by Capt. Johns broke in two on attempting to lift them last week, and were found to be rotten to the centre, but new ones purchased from the firm of Messrs. Harvey and Co. will be ready to lift on the 12th instant. The management of the mine has been under the care of Captain R. Skewis, assisted by Capt. Seal, with Mr. Henry Francis as cashier and chief clerk, who will furnish reports in future, and everything is progressing most favourably.

**FRANK MILLS.**—James Rowe, jun., N. Addams, June 3: We have driven the 45, north of Pichard air-shaft 6 fathoms; the lode is 6 ft. wide, composed of white iron, and containing a little lead. The winze in the bottom of the 45 north is sunk 8 fathoms; lode 1 foot wide, producing saving work for lead. The stopes in the back of the 45, north of Orchard air-shaft, are just as last reported. In driving the 45 fm. level cross-cut east, south of Orchard air-shaft, we have intersected some good branches of lead ore, and have now put six men to drive north and south on them; they are producing some very good stones of lead, and in a few fathoms driving we think they will come together, where we expect to find a good bunch of lead. This we consider a very important improvement, as those bunches have not been seen in this part of the mine for 150 fathoms in length. In the driving of the 72 cross-cut east, north of Orchard air-shaft, we have intersected the lode, and which is composed of white iron, and containing some good stones of lead. On account of the air being so bad in this end we are obliged to suspend the driving of it for the present, but have put the men to sink a winze in the bottom of the cross-cut to open on a branch of lead we discovered on the commencement of driving of this cross-cut, which is producing some very rich stones of lead. In the 72 cross-cut west, south of engine shaft, the ground is of a very favourable character for the production of tin ore, and, by appearances, we are not far off from the lode. The tribute department is looking just the same.

**GAWTON COPPER.**—G. Rowe, G. Rowe, jun., May 30: Our shaftmen are busily engaged in sending down additional pitwork, and completing the new sinking lift below the 105; the water in the bottom of the engine shaft is exceedingly easy, and the ground good for progress. The lode in the 95 east is producing good stones of ore, and showing a very kindly appearance. The lode in the stopes in the back of the 70 is improving, worth 14¢ per fathom. All other points are without change. Our last samplings were weighed off yesterday, 122 tons 11 cwt.

**GLENDALOUGH CONSOLS.**—W. Taylor, J. Taylor, June 1: The lode in the 75 east is not looking so well, worth 5¢ per fathom. In the 78 west the lode is still disordered by a cross-course, but we expect it to improve as it gets off its influence, worth 5¢ per fathom. Rise in the back of this level to communicate with the middle level, worth 12¢ per fathom. The middle level west is worth 8¢ per fathom. The same level east in a disordered piece of ground, lode split up. We have about 2 fms. more to get forth from the winze coming down from the 65 fm. level, which is down within a few feet of this level, worth 8¢ per fathom. There appears to be a poor piece of ground between this end and winze, which we shall get through and hole as early as possible. In the 65 east the ground is very favourable; lode worth 8¢ per fathom. We are hoping to see this lode speedily improve, and will be commencing a level in the ground, white cleans and kills. We hope we are approaching a new shoot of ore. This is most important, being the most easterly end in the mine, and all in whole new ground. The stopes and pitches throughout the mine continue to produce about their usual quantity, varying in value from 12¢ to 25¢ per fathom. Our next monthly sale of ore is computed at 240 tons, which will be sold on the 15th. We finish up the sampling a little earlier this time to put in new cylinder to whim-engine, which is now brought on the mine.

**GOUGHAN AND LEVEL NEWYDD.**—May 31: Bryn Pica shaft, below the 60, has been cleared of stuff, &c., and is now set to sink below the 50 by six men, at 250s. per fathom. This cross-cut, which is due to the utmost speed, and no time will be lost in getting a communication with the 100 fm. level. Fair progress is being made with the new western shaft going down through old workings. The 100 east is set to six men, at 147s. 6d. per fathom; lode 6 ft. wide, containing spar and blende, with a little lead and copper, a promising looking lode. A pitch over the 100 fm. level, 70 fms. east of Taylor's shaft, is set to five men, at 155s. per fathom; lode worth 13 cwt. of lead ore per fathom. A pitch over the same level, 20 fms. west of Taylor's shaft, is set to five men, at 150s. per fathom; lode producing 15 cwt. of lead ore per fathom. A pitch over the 60 fm. level, 20 fms. east of Gilbertson's shaft, set to five men, at 210s. per ton; the lode here will produce 10 cwt. of lead ore per fathom. A pitch over the 40 fm. level, 20 fms. east of Taylor's shaft, set to five men, at 200s. per ton, where the lode is worth 12 cwt. of lead ore per fathom. Surface operations are being proceeded with regularly, and we have sent out samples of 20 tons of silver-lead ore for sale on June 8. Owing to the long continuation of dry weather the water is getting low in the reservoir.

**GORSIEDD AND CELYN LEVEL.**—W. Edwards, June 4: I can see no change worthy of comment at this point, the lode continues quite as productive, yielding a good quantity of ore.—Gorsiedd Level: In the driving east the lode is of good width, and of fine texture. I shall send another parcel of ore on Thursday next. GELYN LEVEL: I have set a level in the 40 fm. level, 20 fms. east of Taylor's shaft, to five men, at 200s. per ton, where the lode is worth 12 cwt. of lead ore per fathom. Surface operations are being proceeded with regularly, and we have sent out samples of 20 tons of silver-lead ore for sale on June 8. Owing to the long continuation of dry weather the water is getting low in the reservoir.

**GREAT WEST VANE.**—Jos. Reach, June 4: Eliza's engine-shaft is now nearly 12 fms. under the 22; ground a little harder than usual; we expect to be as deep as the 34 in about four weeks hence. The 46, east of engine-shaft, is still yielding a little lead and blende ore, and has a much better appearance for the former than the lode in the 34, directly above it. Since last week we have drained the 46, drawn all the accumulated stuff in the western end and rise against the winze under the 34 to surface. Driving the western end and stoping in the roof of the 46, east and west of winze, has been resorted to, but there has not been sufficient done to alter the appearance or value of the lode at these points since my last. The rise above the 34, on Green's lode, 10 cwt. of lead per fathom. The lode in the 34 west is very wide, and consists of crystallised lime spar, gossan, and a little needle ore, and 10 to 15 cwt. of lead per fathom, very promising, and more water than usual percolating from it. The stopes in the back of the 34, east and west of ladder winze, are still producing 1 1/2 to 2 tons of lead ore per fathom. The stopes in the back of the 34, east of ditto, 10 cwt. per fathom. Commencing with the next month, we intend to sink two winzes under the 34 in the ore passed over in driving; these will be about 40 fathoms apart, and each start in a very valuable lode of lead.

**GREAT WHEAL LOVELL.**—Joseph Prisk, June 4: In the cross-cut south in the 34 east we have cut the capels of the lode, and by the end of the week I hope to have driven through it sufficient to be in a position to report on its size and value; already it has partially drained the winze sinking in the 24, which is down 7 fms. below the level. The lode in this winze above referred to is worth 10¢ per fathom; and the lode in the 24, directly above it, is worth 12¢ per fathom. The lode in the 24, east of ditto, 10 cwt. per fathom. Commencing with the next month, we intend to sink two winzes under the 34 in the ore passed over in driving; these will be about 40 fathoms apart, and each start in a very valuable lode of lead.

**GREEN HURTH.**—W. Vipond, May 22: The end going south from the incline is improving, and will soon make a considerable addition to our returns. The stopes behind and above this continues good; the old stopes above the adit level is about as usual, and the new one nearly equal to the rich one below. There is nothing new to report from the driving for old vein, or from Rutter's level or the low level; we shall finish the delivery of the 60 tons of ore on Monday.

**GREEN CONSTANCE.**—W. Vipond, May 22: The end going south from the incline is improving, and will soon make a considerable addition to our returns. The stopes behind and above this continues good; the old stopes above the adit level is about as usual, and the new one nearly equal to the rich one below. There is nothing new to report from the driving for old vein, or from Rutter's level or the low level; we shall finish the delivery of the 60 tons of ore on Monday.

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JUNE 6. 1874.

The lode in the 10 west continues to yield good stones of lead ore, and looks very kindly for improvement; this end is within 4 fms. of the winze sinking in the bunch of ore in bottom of the adit level.—Foxpath: The ground in the adit level is good for driving this week.

Roman Graves—A. Waters, June 4: The 95, north of old engine-snart, is now fresh to a twitch in the lode, and is at present worth only 1 ton of lead ore per ft. of haulage. The 89, south of No. 2 winze, south of shaft, is getting up to the run of athorn. The 99, north of No. 20 and the 65, and in about 7 ft. further driving the rich ore goes under the cross branch, which is always a great find. The 95 is now worth 4 tons and abashed which we shall have a rich course. The 55, south of caunter, is worth 5 tons per foot. The 80, south of Price's caunter, will drive this week, since which Corfield's fault, and improving. We have cut level drained 4 ft. We shall now be able to draw out the shaft, below the 65, has been driving that level in trial to meet the level coming from water to the 80, and resuming driving that level in trial to meet the two points, when we can get the engine shaft. We are waiting to go there. The 65, south of Corfield's (now within 10 ft. of the 80) winze) is in a lode 7 ft. wide, and worth 7 tons of lead ore per ft. 13 fms. of 80 ft. winze), are yielding good ore as for some time past. Full report with the stopes, etc., next week.

Incl. I.—The rise at boundary is now up

[illegible]

ROSEWALL HILL AND RANSOM UNITED.—Wm. Bugelhole, J. White, June 4: The lode in the north Carbona, in the back of the 100, is 3 ft. wide, worth 20¢. per fathom. Nos. 2 and 3 crossings are a little improved, now worth 17¢. per fathom. Since our last we have taken down the lode in the new flat-rod shaft sinking below the 10, and am pleased to say that it fully maintains its size and value, 2½ ft. wide, and worth 25¢. per fathom. This looks well for the next level.

**NORTH CATH BHA**—Wm. Rich, J. Knowlton, June 2: The lode in the 150 yard drift is about 10 ft. wide, and contains some small pieces of iron pyrites and is disordered by a small cross-course. The 164 end, east of the 150, carries no ore, but has a little drift. The lode in the 174 end is 5 ft. wide, having good stones of copper with a little tin. The lode in the back of the 150 east is worth 15¢, 30¢, & 40¢, a kindly appearance. Three stopes in the back of the 150 are worth 25¢, per fathom respectively. Two stopes below the 130 are worth 25¢, per fathom, and 35¢, per fathom respectively. In progress in rising against the new shaft in the 110.

**SOUTH CONNELL CREEK**—J. Vivan and Sons, W. Williams, June 4: In the 82, west of King's shaft, the lode is 5 ft. wide, worth about 25¢. per fathom. In the 71, west of King's shaft, the lode is 5 ft. wide, and worth about 15¢. per fathom. In the 71, west of King's shaft, the lode is 5 ft. wide, and worth about 15¢. per fathom. In the winze sinking under the last named level the lode is 6 ft. wide, and worth about 35¢. per fathom. In the rise over the 71, east of King's shaft, the lode is 5 ft. wide, and worth about 15¢. per fathom. In the 61, east of King's shaft, the lode is 5 ft. wide, and worth about 12¢. per fathom. In the winze sinking under the 61, east of King's shaft, the lode is 5 ft. wide, and worth about 12¢. per fathom. In the last named level the lode is 5 ft. wide, and worth about 6¢. per fathom. In the 20, east of new shaft, the lode is 1½ ft. wide, and worth about 6¢. per fathom. Fraser's shaft has been completed to the 30, and we shall commence driving east and west on the course of the lode to-morrow. There is nothing to remark upon the 30, as it is a very ordinary level.

at other points.

**SOUTH DARREN.**—John Boundy, W. H. Boundy, June 2: Sixting Report: In consequence of continued draught our supply of surface water has so fallen off that our pumping engines do not work fast enough to keep the mine in fork; consequently nothing has been done in the 70 or 80 ends west during the past week. As soon as we shall very soon get some good showers of rain, which would enable us to resume work in all departments. During the hindrance we have put the shaftmen and the 80 end men to stoep in the 70 and 60 west. To stoep the back over the 80, west from the shaft, by six men, at 85s. per fathom; the lode is 3 ft. wide, worth 15l. per fathom for lead and copper ores. To stoep the back over the 80, west from the winze, by six men, at 85s. per fathom; the lode is 2½ ft. wide, worth 14l. per fathom for lead and copper ores. To stoep the back over the 70 west, by eight men, at 100s. per fathom; the lode is 3 ft. wide, worth 14l. per fathom for lead and copper ore. To stoep the back over the 70, west from the winze, by six men, at 85s. per fathom; the lode is 2 ft. wide, worth 12l. per fathom for lead and copper ores. To stoep the back of the 50 west, by four men, at 80s. per fm.; the lode is 2 ft. wide, worth 10l. per fathom for lead and copper ores. A very high lode at present can be done towards the dressing; it now threatens rain, and very little more can be done soon. The mine throughout is looking better than it has for some time past.

**SOUTH GREAT WRK.—**S. J. Reed, May 27: The flat-rod sh. is down to the 25, and the cross-rod driven east and west about 6 ft. The lode is 2 ft. wide, and dips, respectively 9° per fathom. We shall soon open sections of tin ground for stoping, when I look to increased returns of tin. The lode in the 25 east, 27 fms. from the shift, is worth 10f. per fathom. A cross cut is being put out to intersect the great south lode; the distance to drive is about 20 fms., of which 3 fms. are driven; this lode has been seen in the old shallow workings, where it has been said rich stones of tin have been found only 9 ft. from surface. The lode in the 19, 20 west of engine is 1 ft. wide, and 10f. per fathom. The base of the level is at a tribute of 10¢ in 17. We have driven over a good length of tin ground, and look well for a deeper level.

— S. J. Reed, June 4: "We have driven 2 fathoms in the 35, east of flat-rod shaft, the lode in the last 3 ft. driven through has improved in size and value, and worth 14¢ to 16¢ per fathom. The 25 east has also improved, which is considerably in advance of the former—say, 28 fathoms. I am glad to say our prospects are very much better.

**SOUTH ROMAN GRAVELS.**—John W. Powning, June 5: Shelve; The deep all cross-cut west as well as the end driven north on branch are suspended for the present, and the men brought back to drive south on a joint agreeing with the lode or branch seen in costean pit; this end is driven 1 in. 5 ft., the joint carrying a charge of rock. The cutting for foundation for engine and boiler houses, landings, &c., at Shelvefield is being pushed on with a good force of men, and as fast as possible. The large new concrete building in a fortnight.—North Tankerville: We are now laying the heating pipes in the new house, and will be ready to occupy it on Monday next we shall begin to take all heavy weights to Shelvefield.

**SOUTH TOLCARENE.**—J. Vivian and Son, James Paull, June 3: In the 20 fm-level cross-cut, north from the engine-shaft, we are meeting with blende and black copper ore, and the water is increasing, so that we calculate the lode is near at hand. In the deep adit level cross-cut south we have intersected a small branch carrying black and yellow copper ore, but the main part of the lode is still before us, although probably not far off.

**SOUTH WARD.**—R. Goldsworthy, June 3: There is no alteration in the 72 fm. level shot. In the same level north the lode is 4 ft. wide; the capel part is 1 ft. 6 in. wide, producing good saving work. In the 60, on North Hooe lode, but little has been done since last reported on, the men being engaged in laying down tramways, &c.; this completed they will again resume driving. In the 40 south the lode is composed of flookan, capel, quartz, mundie, and has a promising appearance. No other chance to notice.

**TAMAR CONSOLS.**—George Rowe, June 3: The ground in the cross-cut driving south is changing into capel, spar, and killas, with the south branch or lode in the roof of the drirage underlying fast to the north. We still continue the drirage in the same direction to strike the south lode near the old men's workings.

**TANKERVILLE.**—Water, 6 ft. below the top of the lead ore shaft, about 10 fms. 1 ft. 6 in. below the 140-ft. shows considerable strength; the carbonate of lime and quartz, which form the matrix, are highly crystallized, and the lead ore soft and leafy, as is usual in this great lode. We have to-day cut a very strong piece of lead ore from the 140-ft. shaft, which indicates a wide opening in that direction, and we are in good spirits, thinking of finding out where it will come to drive out in the next level. It would appear that nearly all, if not all, the side lodes are in junction a few fathoms west of the shaft, it being clear that as we sink deeper they were formed from all the same source, and that the main lode is important to the mine. The rise at the 92-west was only one-third of Tankerville's

lode, is worth 7 tons per cubic fathom, and the driving east of the cross-cut, on the 120 cross-cut south, which will dip up to the surface, will give us a fine parry, ore lode, which we think will soon open out to a fine course of ore. The 120 cross-cut north, towards the old lode, is into a change of ground and water, which causes us to think the great lode in question is near at hand. The 120 cross-cut is through the old lode lately discovered there, and the men will commence this afternoon to drive east and west of the cross-cut on the course of the lode; there is a fine prospect here. The 110 cross-cut south has cut 6 feet into the great lode referred to above, but is not yet through to the footwall; I value the produce of the lode here, so far as seen, at 5 tons per cubic fathom, and we think that the richer portion of the deposit of ore is still east of the cross-cut, and behind (say, 3 fathoms beyond the foot wall) of the shaft. The 100 cross-cut south will cut the above lode in about 25 fathoms driving. The 92 cross-cut south is into the same strong ore lode as that in the 100 cross-cuts below, so that we are certain now of having a good, new, and continuous run of ore behind what we have hitherto looked upon as Tankerville lode proper. The 74, west of shaft, is just into where Butler's lode begins to show itself; good rocks are already in sight, and as we advance westward a good ore lode may be expected. The stipes are yielding ore as for some time past. Full report and setting list next week. We have to-day sampled the begins of lead ore, for sale June 11. When we have finished our cutting, and begin to drive east and west on the side lodes, our men will be able to find out the

**TEESDALE.**—John Kuehne, May 29: The engine-shaft has been cased and divided, and ladder-stones and ladders put in, to a depth of 11 fathoms. The whinney, gears, &c., are erected, and the ring stoned for the horse. It will take one month to sink the 2 fms. to the level, and draw the stuff which we put after during winter. The 3 fms. also to case and divide to the bottom, after which the forelead going north will be made, and on with all speed to the new ground before us, where we hope to find rich deposits of ore; at the same time we can take away what is already discovered. Hopkins's level has been run eastward on the east and west vein, and produced some nice stones of ore. Mr. Robinson was here yesterday, and decided to put a rise up on the vein to the Sand Dyke level, to prove the sills and the value of this vein for lead and barytes. Of arching has been put in: the ground here is very much as formerly reported, 1 fathom for arching behind as it is needed, 15s. per fathom for driving, and 18s. per fathom for arching ahead as it is needed. The road-making is now reported except at points where the water was dimmed. Road-Making: There has been put in 10 rods levelled and guttered, and 152 rods bottom stoned, also two conduits in place. I hope to get the carts through from Middleton to the mine in a fortnight.

—House, a comfortable one, is built, and we are ready for the joiners.

**TREGEDON.**—The engine-shaft has been cased and divided, and ladder-stones and ladders put in, to a depth of 11 fathoms. The whinney, gears, &c., are erected, and the ring stoned for the horse. It will take one month to sink the 2 fms. to the level, and draw the stuff which we put after during winter. The 3 fms. also to case and divide to the bottom, after which the forelead going north will be made, and on with all speed to the new ground before us, where we hope to find rich deposits of ore; at the same time we can take away what is already discovered. Hopkins's level has been run eastward on the east and west vein, and produced some nice stones of ore. Mr. Robinson was here yesterday, and decided to put a rise up on the vein to the Sand Dyke level, to prove the sills and the value of this vein for lead and barytes. Of arching has been put in: the ground here is very much as formerly reported, 1 fathom for arching behind as it is needed, 15s. per fathom for driving, and 18s. per fathom for arching ahead as it is needed. The road-making is now reported except at points where the water was dimmed. Road-Making: There has been put in 10 rods levelled and guttered, and 152 rods bottom stoned, also two conduits in place. I hope to get the carts through from Middleton to the mine in a fortnight.

—House, a comfortable one, is built, and we are ready for the joiners.

**WOODSPARKDOCK**—**J. In Spargo, Thomas Spargo, June 4:** There is no change to report in the cross-cutting since last report. The lode in the deep adit yields some good work for the first time. The stopes throughout continue as in our last, yielding some good rocks of lead ore. We are pushing on with all points in operation as fast as possible.

**WINDY CREEK**—**W. Hoising, W. Goldsworthy, June 3:** In driving the 44, most of cross-cutting. We find the lode to be getting larger, and producing a little more tin. The end is levelled out, a quantity of water, and we have quite drained the 34. There is no change in the quantity of water, and the stopes throughout the mine are looking much the same as last week.

**TREVERRACK.**—James Pope, June 3: We have now commenced fixing the plunger-lift at the 60 ft. level. The lode in the shaft is 2 ft. wide, principally pebble, with good stones of tin. In the 60 east the lode is 20 in. wide, with a very poor appearance, producing occasional stones of tin; we are daily expecting to find it improving. In the 45 east the lode is fully 3 ft. wide—a fine-looking lode, and very important. In extending it we have every reason to expect a good lode. **TYLLWYD.**—J. Paul, June 3: The lode in the cross-cut is now 1 ft. wide, containing spar, clay-slate, carbonate of lime, and yielding silver-lead ore throughout. We shall now proceed to drive west on course of same, and, as the main body of ore in stope south of engine shaft in adit level dips west and the shaft is perpendicular, we shall have to drive a few fathoms before we reach that part of the lode so productive in the above stope; and, as the lode is very kindly, we may cut into a good bunch of ore before we reach the above point, and I see no reason why we may not expect it. I am glad to say the lode in the level driving south-west in deep adit is gradually improving, being fully 4 ft. wide, ore throughout, and of a very good appearance. I may here remark that this level is going entirely into new ground, and any discovery here will be of very great importance to this property. Our machinery is going well and in good order.

YAN CONSOLS. The main shaft, which is now 10 fms. under the surface, is sinking to the main engine shaft, which is 16 fms. under the surface. The branches referred to in last week's report still continue to produce fine stones of lead ore. These are no doubt flyers from the lode. The lode in the winze under the 15 is without change, yielding 10 tons of lead per fathom. The lode east and west of same are worth respectively 7 and 8 tons of lead per fathom. The driftage of the 15 east has been somewhat retarded throughout the past week, on account of a huge quantity of ore ground in the back having come away, filling the shaft, &c., and stopped all thoroughfare, consequently little has been done at this point. The average quantity of ore produced from the roof of this level is 10 tons per fathom, and the quantity of lead—4 tons per fathom. No change in any other part of the mine. Dressing of ore and all other work vigorously carried on. We shall sample our parcel of lead (100 tons) on Tuesday next.

WEST ESCAIR E.E. R. Harvey, June 24. We have the water fork at the eastern mine, and the sinking of Hamilton's shaft below the 24 is progressing well. In order to facilitate the sinking, and endeavour to make up for lost time, I have placed three men more with the shaftmen, making the number nine instead of six. I am anxious that the shaft should be pushed down with all dispatch possible, and that the water should be kept down. I have not seen any signs of the appearance of the wall of the lode that our expectations of having a good course of ore at the next level will be fully realised. We have a small quantity of water in the reservoir, which I keep in reserve for the working of this mine. We have not yet sufficient water to carry on operations in the western mine, consequently I have to change to report upon this point since my last. The weather continues heavy.

**GODOLPINJ.—** *J. Pope, junr, June 2:* Statement of setting, with value of the different bargains:—*Cauter Lode, Pressure Shaft:* The lode in this shaft is 2½ ft. wide, worth for the length of the shaft 30¢. per fathom; sinking by nine men. The 50 fm. level to drive north west of Pressure shaft, by two men, at 1¢. per fathom; lode 15 in. wide, worth 7¢. per fathom. One stope in the back of this level, to four men, at 2¢. 10s. per fathom; lode and branches 3½ ft. wide, worth 20¢. per fathom. Two stops in the back of this level, south-east of Pressure shaft, one to six men, at 2¢. 12s. 6d. per fathom; the other to four men, at 3¢. per fathom. *Winn Lode, Pressure Shaft:* The lode in this shaft is 2½ ft. wide, worth 30¢. per fathom. Pressure shaft is not set, but shall do so as soon as the winze on Pink lode is communicated with this level, which I am hoping will take place every day. The 40 fm. level to drive north-west of Pressure shaft, by four men, at 3¢. 10s. per fathom; lode 20 in. wide, worth 5¢. per fathom. The 20 fm. level to drive south-east of Pressure shaft, by two men, at 10¢. per fathom; lode 2 ft. wide, improving in appearance, saving work for tin. The deep adit level to drive south east of Vician's shaft, by two men, at 10¢. per fathom. The 20 fm. level to drive south-east of Vician's shaft, by four men, below the adit level, and secured the same to that depth. *Pink Lode:* The 50 fm. level to drive east of the cauter, by six men, at 10¢. per fathom; lode 15 in. wide, worth 20¢. per fathom. To drive in the bottom of the winze sunk in the 40 fathom level, west of the cauter, by six men, at 12¢. per fathom; lode 15 in. wide, worth 10¢. per fathom. One tribute pitch to two men, at 5s. in 1¢. to one to two men, at 6s. 5d. three to seven men, at 10s.; and twelve to twenty-three men, at 11s., at

standard of 50 $\frac{1}{2}$  per ton for the tin.

**WEST GREAT WORK.**—S. J. Reed, May 28: The Trescow Moor lode, in the flat-roof shaft, has been taken down, and is 2 $\frac{3}{4}$  ft. wide, leaving a highly promising appearance compared with the level above, and worth 15 $\frac{1}{2}$  to 17 $\frac{1}{2}$  per fathom for the tin. The shaft now 6 fathoms to the level above the 23 fathom level. The lode in the 23 fathom level west has been disturbed by cross-branches; it is again to-day presenting a better appearance, with increased productiveness, and approaching the main shoot of tin passed over in the level above. In the 16, west of Park Sampson shaft, we have intersected the Croft Gothall lode, nearly 2 ft. wide; it produces quartz, mudstone, and strongly impregnated with copper and tin; the men from here are engaged cross cutting south to cut the Trescow Moor lode, which has been house-sunk by the large flooken recently run well. The level will be 10 fathoms below this. This level has been taken down to sink Stevens' shaft below the adit; the lode is 5 ft. wide, producing good stamping work. The machinery and pitwork are in good working order.—[The above arrived too late for insertion in last week's Journal.]

— S. J. Reed, June 34: The improvement that has taken place in the 26 west, and which I referred to in my last letter, holds good; the lode is 2 ft. wide, and worth 10¢. per fathom; this is now nearly under the dip of the tin ground seen in the level above; and if that level may be taken as a criterion for the 26, we have a very valuable lode for over 30 fms. in length; the lode in the shaft has increased in the new 2 ft. wide, over 15¢. per fathom.

WEST MARIA AND FORTESCUE.—W. Skevis, N. Coward, June 4: Sinking of Willeford's shaft by side of lode below the 93 is being continued as fast as possible, and there is no change to note in the ground. In the 93 west, as stated last week, the men are working by side of the lode. The stope in bottom of the 93 is now 15' per fathom. The stopes in back of the 93 when last taken down were about 20' per fathom. The men are now going up by the side of the lode, which will be taken down at the end of the month. The machinery throughout the mine is working very well.

WEST TANKERLE. — Arthur Watts, June 4. The boundary shaft below the 50 will be proceeded with at once, and we shall to-morrow set the whole depth, i.e., to the 65—at a given price per fathom. The 50, south of shaft, is improving as the two lodes near each other; there is now about 5 ft. of stone between them, and the yield of ore from both veins is at present 2 tons per fathom. In the 48 south we have two men sifting ground and preparing to sink a shaft. The 48 south is good lead and blende stuff, and is opening paying ground. Lawrence's lode is standing some 8 to 12 ft. west of main lode (speaking from where the 48 end is now), and we have put two men to cross-cut to it, believing it will be found productive. The new lode is still west of Lawrence's, so that our chance of making

discovers out of the south is considerable. Full report and setting list next week.

WEST WHEAL GORLAND.—John Mayne, June 4: Messer's: I am pleased to inform you that the lode in Messer's shaft is daily improving; all the stuff that is broken therefrom will be saved from the steam-stamps. We have cut through the lode in the cross-cut; it produces tin throughout, looks very promising, letting out water freely, and we shall on Monday next commence to drain the water, after breaking the lode in the west vein again, and repairing the same for the sinking, and will inform you of the value by circular the latter part of next week.

N. & D. C. L. S. W. N. R. M. & C. O.

WEST WHEAT TOLGUS.—June 4: The lode in the 125 end west is 6 ft. wide yielding 9 tons of good ore per fathom. The lode in the rise in back of the 125 is 3½ ft. wide, yielding 5 tons of ore per fathom. The lode in the 115 end west is small and poor, composed of prian and spar, and letting out more water; we shall have a large lode here soon. The lode in the 95 end west is about 18 in. wide, with a little ore, but not enough to value; we are glad to say the ground is better than it has been, so that greater progress will be made. The lode in the winze below

the 55 (some 7 or 8 fathoms before the 95 end) is 8 ft. wide, yielding 4 tons of ore per fathom. The lode in the 55 end west is 6 ft. wide, yielding 10 tons of goods ore per fathom; the lode is hardly so good as it has been, but will yield quite as much ore—a splendid lode. The rise in the back of the 85 was holed to the 75 ft. level. The last Friday the ore heukd up all the way, the rise commenced with 5 tons per fathom, and finished with 5 tons—a good deal of goods ore. The 85 level is now being raised to the 100 ft. level. The rise has been put little down in this end since cutting the ore, as these men were put to sink a winze against the 85 rise, which has now been holed. Richard's shaftmen are putting down bob and rods in the new shaft. The lode in the 65 end west is 2 ft. wide, with stones of ore. The rise in the back of the 65, east of shaft, is being put up in killas; we hope to communicate this shaft with the winze below the 55 by the end of the month. The lode in the 55 end east is 8 ft. wide, yielding 10 tons of goods ore per fathom. The rise in the 55 end east is being put up in killas; we hope to set another going soon to help with a little ore; each step will yield 20 tons of ore per month. There is a good tram-road now put in from shaft to end in the 55 ft. level—east from shaft.

**WHEAL ARGUS.**—T. Trahair, June 3: The tribute pitch in the back of the 20, east from Collyer's shaft, on the Elisha lode, is looking very well. In the pitch in the back of the 20, east of the skip shaft, the lode is not looking so well as when last reported. In the pitch in the back of the 10, east of the skip shaft, the lode is large—good saving work. We are sorry the water is so little at the stamps.

WHEEL BASSETT AND GRYLLE.—W. Oats, P. Prisk, May 20: The stripping down and stoping of the north part of the lode in Wheel Cock engine-shaft continues as last reported. There is no change of importance to notice in the 35 or the 15 driving east since last report. At the new shaft, on the south lode, we have removed the earth and commenced sinking—now down 2 fms.; the men are now engaged putting in collar, &c. In the tribute department there is no change.

placed putting in cigar, etc. In the tribute department there is no charge. The following is a list of the bargains, description and particulars of which are given in the report presented at the adventurers' meeting held on Friday:—A crosscut to drive north of Wheel Cook engine shaft at the 45 fm. level, by six men, at \$8. per fathom; the new shaft to cut down and secure on the south side, by four men, at 9¢ per fathom. The 15 to drive east of new or eastern shaft, by four men, at 9¢ per fathom. The new shaft to cut down and secure on the south side, the month, by six men and three boys, at 5¢ per fathom; to be carried 10 ft. long from 15 to 18, in 1/2, at 50¢ per ton for tin.

WHEEL COATES.—W. H. Martin, June 3: The branches in the north side of the engine shaft produce tinstuff for the stamps; the elvan that came in from the south we have cut into it 2 ft., and no south wall, and it is not underlying quite so flat as when it first came in the shaft. In the winze sinking below the 20 we have a hard floor of spar and red iron-ore, which does not produce as much tin; under this floor we expect an improvement in the lode. The stopes are without any chance to develop since last week.

**WHEAL CREBOR.**—Capt. Andrews, June 3: The lode in the 120, east of Cook's shaft, has improved in the last 3 or 4 ft., and is now 18 in. wide, yielding 1 ton of ore per fathom. The lode in the stope in the back of the 120, east of rise, is 6 ft. wide, and worth 20¢. per fathom. In the 108 east we are driving by the side of the lode. The ground in the 72 cross-cut north is without change. The lode in the 48 east is 2 ft. wide, yielding good stowes of ore—a very promising lode.

WHEAL GRENVILLE.—E. Hosking, W. Bennetts, June 3: The ground is favourable, and the men are making fair progress in sinking the new shaft below the 150. The rise above the 150, on South Condorrow lode, is worth 20% per fm. The lode in the 140, east of cross-cut, is worth 15% per fathom. The rise above the 140, on the 130, is worth 25% and 10% respectively. The south shaft sinking below the

**WHEEL KITTY** (St. Agnes).—8. Davey, J. Williams, May 50: New Shaft: Pryor's Lode: The shaftmen are making fair progress in cutting the plat at the 142.

We are pushing on tin driving south in the 142 in order to reach the lode to the south of the gossan, which we hope to do in one week or two. In the 142 driving east of shaft, the lode is producing a little tin, but not sufficient in value. **Caution:** Lode: In the 142, driving north, we are still desusing the lode, but shall in the course of next week take down, when we will give you the size and value. The lode in the 130, driving west of shaft, is  $3\frac{1}{2}$  ft. wide, and worth for tin 13¢ per fathom. We have not as yet taken up the lode in the 130, east of shaft. In the 135, driving west of shaft, the lode is worth for tin 10¢ per fathom. The lode in the 136, driving east of shaft, is worth for tin 12¢ per fathom. The lode in the 137, driving east of shaft, is producing low-quality tin-stuff. The lode in the north adit level maintains its size and character.

**WHEEL PEEVOR.**—Wm. Pryor, Mar. 30: Since our last report the shaftmen have had fair progress in sinking Sir Frederick's engine-shaft, the hole in which continues about the same value as last reported—50*f*. per fathom. The 48 is cleared about 16 fathoms west of shaft; we have about 14 fathoms more to clear to reach the end. In clearing this level we came in on a slope in the bottom about 11 fms. from shaft, which from all appearances is the course of tin ground referred to in former reports. We cannot, however, form a correct value of it, it being under water, but judging from the strata broken out of it, and samples from the lode around, we have every confidence in stating that it will be a very rich tin lode, the expectations previously expressed. The shaft is being pushed on with all vigorous exertions anxious to be able to fully report on this course of tin ground. We have also cleared a winze and secured same from the 36 to the 48 west, which has opened up a good piece of tin ground for tribute, a part of which we have to-day set to for men, as stated below. We have 29 men working on tribute as follows:—Four men in the back of the 48 west at 10*s* in 1*l*; four men in the back of the 40 west at 9*s* in 1*l*; four men in the back of the 40 west at 10*s* in 1*l*; four men in the back of the 36 west at 10*s* in 1*l*; four men in the back of the 40 east at 10*s* in 1*l*; four men in the back of the 36 east at 10*s* in 1*l*; four men in the back of the 30 east at 12*s* in 1*l*; two men in the back of the adit level east at 13*s*. 4*d*. 1*l*. and 12*s*. 4*d*. 1*l*. are all getting wag *s*. The dressing department is being pushed on with all speed, and every effort is being made to have the buddles, &c., completed. We are getting on satisfactorily with the dressing of our next batch of tin.

WHEAL RUBY. J. Richards, June 3: I reported last week that we had intersected a large cross lode, and that we had cut into it 4 ft.; we are now into the cross lode 9 ft., which is still wider. I think, however, we shall soon be through it, and ascertained its full value, and I have rarely seeing a finer or more masterly cross-course; it is letting out water freely, which speaks well for the main lode on the western side of the shaft in driving through the cross lode. I think we shall soon cut the main lode, as I don't expect to find it heaved.

soon enter the hill to see, as I don't expect to find it heated. The hill is composed of sandstone, Nainian, and is about 32 ft. high. It is very steeply sloping, and we have to dig down, and are still unable to speak definitely in regard to the position of the new and old lode; it is to present appearance going off in a southerly direction from the lode; we are still stripping the side down to follow it. We have reached the junction of the new with Goddard's lode in the 23 fm. level going north, and to day there is a new branch of lead and blende appearing in the forebrest, and also a strong feed of water coming from the end. We shall now soon prove this point of value or otherwise. There is no other change underground to note. We have now reached to the tons of blende, and we have about 18 tons of lead dressed and on the floors. After the blende is cleared off we shall make up another pile of lead as soon as possible.

and soon as possible. Rich, M. Rogers, S. Coode, jun., May 30. We have forked the water out of Hind's shaft below the 50, and intend to resume sinking the same next week. Good progress is being made in the rise in the back of the 130 towards this shaft. In the incline shaft we have completed the skip-road to the 100 end below the run; we shall have to put in new road from this point to the 140. The incline shaft is 100 fathoms deep, and is intersected by the 100, 120, 140, and 160 fathoms. The 100 fathoms intersects the 160. The lode in the 160, west of sump, is worth 7 $\frac{1}{2}$  per fathom. The 100 fathoms east is worth 12 $\frac{1}{2}$  per fathom. The rise in the back of the 150 east is worth 6 $\frac{1}{2}$  per fathom. The rise in the back of the 140, towards King's shaft, is worth 7 $\frac{1}{2}$  per fathom. The 120 east is worth 10 $\frac{1}{2}$  per fathom. The 120 east is worth 6 $\frac{1}{2}$  per fathom. The 100 fathoms east is worth 10 $\frac{1}{2}$  per fathom. The 160 east is worth 8 $\frac{1}{2}$  per fathom. The 50 east is worth 7 $\frac{1}{2}$  per fathom.

## THE SOUTH TREBURGETT MINE.

This is, probably, the oldest silver-lead mine in Cornwall, and, strange to say, was discovered and worked for many years by a German, who, however, only drove an adit level in from the valley on the course of one lode at a depth of 20 or 30 fathoms. The oldest inhabitant recollects hearing 60 or 70 years ago that so fortunate were the foreigner's discoveries that on one occasion he celebrated his good fortune by a great rejoicing to the neighbourhood, with much firing of guns and hoisting of flags. He also erected a smelting-furnace, and reduced the ore on the spot, the remains of which can still be seen, as well as lumps of slag. It was the working of this mine that led to the discovery of Old Trebregett. Some years after the German had left the country, enriched by his fortunate discovery, and when Old Trebregett was causing some excitement from the wealth of its mineral, attention was again directed to this mine on the south. The old workings were explored, and a considerable quantity of ore raised. The adit was also driven some distance, but given up in consequence of the hardness of the bed and the great cost.

A new lode was also discovered, producing argentiferous antimony. This shaft was sunk 8 or 9 fathoms, and an adit level brought up to it. From the backs large deposits of this ore were taken—20 or 30 tons in a bunch. The Old Trebregett then ceasing to be worked this mine also became abandoned, and both, being situate in an out-of-the-way district, were forgotten. Many years later it was discovered that Old Trebregett had produced a distinct silver ore near the surface, which had been unrecognized and thrown away on the spoil banks. The rubbish heaps were ransacked, and the hard capel of the lode, hitherto considered valueless and given to the parish to repair the roads with, but which contained silver, was sold at prices varying from 16*s.* up to 2*s.* per ton. On re-working the mine this ore has not been met with in any large quantity, and in depth it appears to lose its distinct character, and only makes the lead ore, thereby enriching the same.

### EAST ST. DENNIS CONSOLS TIN MINE.

In the rich mining district of St. Stephen's, Cornwall, surrounded by mines of considerable reputation for a long period, there exists an area of a sett nearly a mile square, where tin ore is practically inexhaustible, and of a character seldom found, known as "Diamond tin," samples of which have been pronounced by competent judges as of the very best quality; in addition to this, there are thousands of tons of "stent" on the surface, 100 acres of which may be immediately utilised. Several lodes have been recently discovered, averaging from 7 to 10 feet in width, one very recently, on the apex of the hill, which was cut and sunk to the depth of 4 fms. to the level of a true stamiferous vein, and contains rich work for tin. Other parallel veins exist, and the lodes can be wrought in an unusually economical manner. The dues payable to the lord of the manor are only 30*l.* per annum, merging into dues of 1*l.* 1*sh.* The facilities for carriage are very great, as the high road from Roche to Truro forms the boundary of the sett, and the Cornwall Railway is within half a mile of the centre of the area. A canal, constructed for drainage purposes passes through the mine, and the situation of which is in every way calculated to render the working of the mine means for economical working. The application of steam power will materially develop the resources of this valuable mining property, and it is proposed to adopt this to the fullest extent. The assay proves that the value is above the average of the county, and at least 62 lbs. of tin to the ton of stuff is ascertained to exist, and this is the average within 10 fms. of the surface, and so situated that it can be easily worked into the valley below. The lodes are embedded in soft, a few feet of granite, and are large and rich for tin. No costly winding is required, as the stuff can be trammed into the stamps.

The property is well known to those on the spot as one of the most valuable and productive mining properties in Cornwall. The facilities which exist in the present day for obtaining accurate and personal knowledge of mining properties in England are such that it needs only a visit to the various properties to ascertain their worth and extent. There is every reason to believe that the East St. Dennis mine, which occupies the most favourable position, contains an unexampled store of the richest tin found in the district, one with ordinary mine and enterprise may be found to be one of the most productive and valuable mines in this rich mining district of Cornwall.

**SAFE TIN MINING.**—We understand that very extensive machinery is being erected by the Caribgeon Rock Tin Company at their works near Ingham, where they have an enormous deposit of tin-bearing rock some 30 fathoms in width, the whole of which are now being worked and which, it is claimed, this company was formed privately by the Fuzelman Iron Ore Company, the origin of which it may be remembered, of the Tretail Tin and Iron Mining Company, which was published in January, 1873. At Tretail operations have been also carried on vigorously, and they have been making returns of tin and iron for some time, though we hear that there is still a great deal of work to be done in the way of erecting dressing appliances, so as to enable them to deal with the whole of the stuff they are in a position to put through the mills. Both mines have so far, although registered as tin mines, been worked on a small scale, and the extensive undertakings, and they may both be properly designated "safe" mines from an investment point of view. The great drawback and risk to which an investor is liable is that most mines, being deep, require constant pumping whether they are being worked or not, and if an adverse change of any kind takes place it at once becomes a question of entire abandonment or a ruinous expenditure. The mines mentioned are entirely free from this risk, because the one is simply an immense quarry, and the other is drained by an adit, below which there is no apparent necessity to work. In the latter case, however, the water, being raised by a pump, is not actually in sight, all that has to be done if a serious drop in tin occurs is to stop working for a time, and, keeping on two or three hands to attend to the machinery, wait quietly for better times, which, as we have seen exemplified during the last few months, is sure to come. During the recent depression many mines had to be abandoned, not because they were poor, but because tin was so low that it could not for the time be produced except at a great loss, and yet the immense pumping charges



with which many of them were burdened must be met, or the mines left to fill with water, which it would take years for the machinery at their disposal to clear them of. This being the case, abandonment was the only course the managers could adopt, and this is why it may be said that mines such as we have described are "safe."

**DENBIGHSHIRE CONSOLIDATED.** The announcement made this week of the approach to the deposit by the driving at a depth of 112 yards (east) will be received with the greatest satisfaction; the general opinion in the neighbourhood of the works has been that immediately the company succeeded in reaching the spot (now almost in sight) a great body of ore would be the result. At the 112 west, likewise, the junction of veins may be daily expected, so before (say) the close of June, the pioneer points of operations will be achieved. At junction the shaft great progress is being made, and the indications are strongly in favour of the approach to a strong body of ore. Although it has cost time and considerable expenditure to carry on so extensive a development, still it is admitted by those who best understand the mine and its district that the reward will fully compensate. The dressing-floor is fully prepared for a preparation of a large monthly return, whilst the affairs have been carried on most satisfactorily. We understand there does not exist a debt or any liability whatever.

**FRANK MILLS.**—This mine sold, on May 30, 70 tons of lead ore, at advanced prices, against 50 tons for the previous 12 weeks. The report, which will be found in this week's Journal, shows a very important improvement in the 45 cross-cut east, south of Orchard air-shaft, as well as improvements in other parts of the mine. The prospects lately have undergone a great change. The Teign Valley Railway Bill—which will run close to this mine, and also to South Exmouth Mine—has been read a third time and passed.

**BENSBERG LEAD MINING AND SMELTING COMPANY.**—Three of the directors (the Chairman, Messrs. Coltart and Ashton) and Mr. Thompson, the secretary, visited Bensberg last week, and spent three entire days on the company's property. Satisfactory progress was being made with the shafts and levels, all of them producing good ore for dressing, while at the west end of the open-cast a considerable quantity of rich carbonate was being obtained. The dressing machinery was working well, and though the iron pyrites continue to be troublesome it is anticipated that at greater depth it may disappear. The practical knowledge of Capt. Craze, together with his great energy, has effected a most gratifying change, and the whole of the operations were being carried on in a much more systematic and business-like manner than had previously existed. The usual report from the agent will be found among the Mining Correspondence.

**CHAPEL HOUSE COLLIERY.**—The output is as large as hitherto, and the coal is still being sold as fast as it is raised; indeed, we understand that the company is obliged to buy coal to supply its customers' requirements, a profit, of course, being made on the transaction. Steps are being taken to increase the raisings, which are now about 700 tons per month, and the manager does not entertain the slightest doubt as to finding a market for three or four times the present production. This is one of the advantages of the proximity of the colliery to such a market as Liverpool. The colliery has not been at all affected by the late strikes, and we hear that good profits are being made. The second dividend may be looked for in the course of next month.

The Pontgibaud Silver, Lead, and Smelting Company notify the payment of an instalment of 25 frs. per share on account of the dividend for the year 1873-74.

### COAL MINES REGULATION ACT, 1872.

#### EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF F. N. WARDELL, Esq., H.M. INSPECTOR OF MINES.

**NOTICE IS HEREBY GIVEN**, that an EXAMINATION for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, will be HELD on the 7th day of July, and CANDIDATES intending to present themselves at such EXAMINATION must, on or before the 15th day of June, notify such intention to the Secretary of the Board of the above-named district, from whom all information as to particulars can be obtained.

By order of the Board,  
JOHN R. JEFFERY, Secretary,  
5, Piccadilly, Bradford.

### COAL MINES REGULATION ACT, 1872.

#### APPROACHING EXAMINATION FOR MANAGERS' CERTIFICATES OF COMPETENCY.

DISTRICT UNDER THE CHARGE OF JAMES WILLIS, Esq., H.M. INSPECTOR OF MINES.

**PERSONS DESIROUS** of being EXAMINED in this district for MANAGERS' CERTIFICATES OF COMPETENCY, under the above-named Act, should at once communicate with the Secretary of the Board of the above-mentioned district, at the following address:—

By order of the Board,  
G. W. BARTLETT, Secretary,  
Cleveland Parade, Darlington.

#### VAN CONSOLS.

**A SHAREHOLDER AND FIRM BELIEVER** in THIS MINE has noticed for some time past that these shares continuously offered by various persons for sale in the columns of the Journal under the market price of the day, and has frequently written offering to purchase such shares. In nearly every case the application has resulted in the reply, "The shares are sold," some times, "Send a deposit," &c., &c. It is impossible to understand why shares like Van Consols, which have one of the readiest markets, and as easily dealt in as any British Mine in the Stock Exchange need be offered by advertisement at or under the market price.

The Advertiser is prepared to BUY ANY PART OF FIVE HUNDRED SHARES at the price of the day and bona fide sellers will find a cash purchaser (Bank notes in exchange for transfer certificates) by addressing, "W. E." care of MINING JOURNAL Office, 26, Fleet street, E.C.

#### TO INVESTORS.

**ANY GENTLEMAN, DISPOSED TO INVEST** from £500 to £1000 or more in a MINING UNDERTAKING of great promise, may receive full particulars by addressing "Bona Fides," MINING JOURNAL Office, 26, Fleet street, E.C.

**AN ENGINEER (CIVIL AND MINING)**, with a good connection, is in WANT of a MONEYED PARTNER. Address, "Fuel," MINING JOURNAL Office, 26, Fleet street, London.

**AN ENGINEER IS REQUIRED IMMEDIATELY** to UNDERTAKE the SUPERINTENDENCE of a SHORT RAILWAY of SIX miles, and its ROLLING STOCK, and of the SHOPS and MACHINERY of an IMPORTANT FOREIGN COMPANY MANUFACTURING LEAD. He would be required also to undertake the construction of furnaces, and to be familiar with all kind of work required for metallurgical purposes. First rate references are essential. Address, "Engineer," care of the Housekeeper, 24, Great St. Helen's, E.C.

**A FIRST-CLASS MINING AND GENERAL ACCOUNTANT** SEEKS AN ENGAGEMENT, HOME OR FOREIGN. Highest references. Salary at home, £120 per annum. Address, "X. 1001," MINING JOURNAL Office, 26, Fleet street, London.

#### TO FINANCIAL AGENTS.

**WANTED, THE ASSISTANCE** of an AGENT, or AGENTS, TO PLACE AWAY the SHARES of a GOOD TIN MINE in CORNWALL. No promotion money or premium required. The whole amount raised (about £6000) to be applied to the erection of machinery to return its produce, which is considerable. A liberal commission allowed to an energetic person. For further particulars, apply to "Miner," MINING JOURNAL Office, 26, Fleet street, London.

**WANTED, A GOOD MINE SMITH**, at the WHITEHAVEN IRON MINES, ESKDALE-BY-CARFORTH, CUMBERLAND. Apply, or address, J. ROSEWARNE, as above.

**EIGHT PER CENT. PER ANNUM OFFERED UPON** FIRST-CLASS LAND MORTGAGE SECURITY. For prospectuses, and other information, apply to W. GUNDRY, 2, Ashwood-terrace, Huddersley, Leeds.

**FOR SALE, A FIRST-CLASS AND EXTENSIVE CHINA-CLAY** SETT, close to rail, and near a shipping port. A good and safe investment. Address, "P. J.," St. Columb, Cornwall.

#### TO IRONMASTERS.

**FOR SALE, AN IRON MINE OF PROVED VALUE**; close to rail, and near a shipping port. Invaluable to a gentleman desirous of raising a sum with a view of utilising it. Address, "J. M.," MINING JOURNAL Office, 26, Fleet street, London.

#### MINING IN SPAIN.

**OWING TO the present state of matters in Spain**, several good MINES of IRON, ZINC, LEAD, and COPPER can be BOUGHT for a mere NOMINAL SUM. As an investment these will pay handsomely with a little keeping. Address, Mr. Woods, Santander, Spain.

**MR. T. PARKYN, MINING ENGINEER, ST. AUSTELL.** (30 years' practical experience) can recommend SHARES in the EAST of DENNIS and HEATH HILL MINES with the greatest confidence. These are safe to buy. Bankers: South Cornwall Bank, St. Austell.

**THOMAS EDGLEY AND CO.,** AGENTS FOR THE PURCHASE and SALE of COLLIERIES, AND OTHER MINERAL PROPERTIES, &c. MANXON HOUSE CHAMBERS, 12, QUEEN VICTORIA STREET, LONDON, E.C.

**\*\* With this week's Journal a SUPPLEMENTAL SHEET is given,** containing—Original Correspondence: Mining in New South Wales (R. Adams); Emma Mine and the Flagstaff; American Mines (R. Knapp); Financial Record of the Month of May (R. Tredinnick); Kalosic Gas (L. Bagge); Eskdale Mine (R. Symons); The Late Mr. Ennor (R. Symons); Slate Quarries as an Investment (E. Betley); Miners' Pay, and the Tally System of Four Weeks (G. Row); Pennerley Mine; Fronwyd Mine (T. Morris); South Roman Gravelly—Foreign Mining and Metallurgy—Gold Deposits of Nova Scotia, No. 11—Tin, Copper, and Coal Trades—Australian Tin Sold in London—Patent Matters, &c.—Meetings of the Swansea Valley Steam Collieries, Skearn Ironworks, Bonville Court Coal and Iron, Almada and Tifrito, Rio Tinto, Central American, Cornwall Minerals Railways, Gawton Copper, Wheal Bass and Grylls, and Pedin-andrea Companies.

### The Mining Market: Prices of Metals, Ores, &c.

#### METAL MARKET—LONDON, JUNE 5, 1874.

COPPER.				IRON.			
Best selected... p. ton	£	s. d.	£ s. d.	Bars Welsh, in London	0	10-15	5 0
Tough cake and tile	52	0	0-85 0	Do., to arrive	9	15	0
Sheeting & sheats	90	0	0-91 0	Nail rods	11	0	—
Bolts	96	0	0-98 0	„ Staffs, in London	11	5	0-11 10
Bottoms	93	0	0-95 0	Bars „ ditto	11	10	0-14 0
Old	80	0	0-85 0	Hoops, „ ditto	12	10	0-14 0
Australian	85	0	0-87 0	Bars „ at works	10	10	0-11 10
Wire	per lb.	0	1 0½- —	Hoops, „ ditto	11	10	0-14 10
Tubes	0	1	0-2 — 1	Sheets, single, 3 plates	13	10	0-15 0
BRASS.				Pig No. 1, in Wales	5	0	—
Sheets	per lb.	10d.-11d.	—	Refined metal, ditto	7	0	—
Wire	100d.-11d.	—	—	Bars, common, ditto	9	0	—
Tubes	11d.-12d.	—	—	Do., merchant, f.o.b.	9	0	—
Yellow metal sheathing	7½d.-8¾d.	—	—	In Tyne or Tees	9	0	—
Sheets	7¾d.	—	—	Do., railway, in Wales	7	15	0-8 0
SPELTER.				Do., Swed. in London	18	0	—
Foreign on the spot	per ton.	22	0-22 10 0	To arrive	16	10	0-18 0
„ to arrive	22	0	0-22 10 0	Pig No. 1, in Clyde	4	10	0-6 0
ZINC.				Do., f.o.b. Tyne or Tees	4	0	—
In sheets	27	0	0-28 0 0	Do., Nos. 3, 4, f.o.b. do.	5	0	—
QUICKSILVER (p. bot.)	19	15	0- — 0	Railway chairs	5	0	—
				„ spikes	12	10	0-14 0
				Indian Charcoal Pigs	10	0	—
				In London, p. ton	11	0	—
TIN.				STEEL.			
English blocks	£100	0	0-101 0 0	Swed., in kegs (rolled)	—	—	—
Do., bars (in brls.)	101	0	0-102 0 0	Ditto (hammered)	20	10	0-21 10
Do., refined	103	0	0-104 0 0	Ditto, in fagots	21	15	0- — 0
Banca	100	0	0-102 0 0	English, spring	23	0	—
Straits	98	0	0-98 10 0				
Australian	94	0	0-94 10 0				
TIN-PLATES.*				LEAD.			
IO Charcoal, 1st qua.†	£1 18	0	0- Nom.	English Pig, com.	21	0	—
IX Do., 1st quality	2	0	0- — 0	Ditto, L.B.	21	0	—
IX Do., 2d quality	1	15	0- — 0	Ditto, W.B.	23	0	—
IX Do., 3d quality	2	1	0- — 0	Ditto, sheet	22	15	0- — 0
IX Coke	1	9	0- 1 10 0	Ditto, red lead	23	0	—
IX Ditto	1	15	0- 1 16 0	Ditto, white	20	0	—
Canada plates, p. ton.	19	0	0- — 0	Ditto, patent shot	25	0	—
Ditto, at works	18	10	0- — 0	Spanish	20	10	0- — 0

\* At the works, 1s. to 1s. 6d. per ton less. † Add 8s. for each X.  
Terne-plates 2s. per box below tin-plates of similar brand.

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**REMARKS.**—Although there is no important present improvement to report, the consideration forces itself into considerable prominence that the time cannot be far distant when a return to general animation in the various branches of the metal trade may confidently be looked for. There has been a very protracted period of dullness, during which, however, stocks in consumers' hands generally must have been decreasing; the necessities of commerce—nay, of life itself—have demanded a continuous consumption of metals; and, notwithstanding that consumption has been very materially reduced in consequence of the difficulties which have surrounded the metal trade, still stocks must have been getting low, and when the revival in demand sets in a period of activity in furnace, rolling mill, and workshop must follow. The continuance of fine weather promises a productive harvest, and should these hopes and expectations be realised this itself will do much to stimulate trade. Money is unwisely cheap. Last Thursday Bank rate was again reduced, and now stands at 3 per cent. All that is wanted to put the machinery in motion which shall inaugurate a fresh start in the metal market is a good understanding between employers and employed, and albeit the hopes of an amicable and stable settlement of the points in dispute, which have repeatedly been entertained, have as often been doomed to disappointment; still, it is hard to believe that both the contending parties can remain much longer so blind to their own best interests as not to come to terms one with the other. During this week there has been decidedly more doing in the higher priced metals, partly the result of some little speculative movement, and partly because of purchases made by smelters and manufacturers. Money is wanted to be the commencement of the period of animation to which reference has already been made. It is impossible, however, for the metal trade to settle down into a condition of healthy activity unless the coal trade takes the lead, and supplies of fuel may be depended upon with regularity, and without those sudden fluctuations in value which have for some time past effectually upset all reasonable calculations.

**COPPER.**—Owing to the announcement of favourable deliveries for the last fortnight in May improved prices have been paid for Chili bars, and the tone of the market has become altogether stronger. The price has gradually advanced for g.o.b. to 76 $\frac{1}{2}$  10s. to 77 $\frac{1}{2}$  10s., and holders are not very free sellers even at these improved rates. Should this favourable turn in the market be supported by advices from the West Coast of light charters, it may prove that the lowest point in the decline of prices has been attained, and that a gradual improvement may ensue. As stocks very generally in the hands of consumers are reported to be moderate, and in some instances very light, it is possible that, with the probabilities of the market before them, they may incline to become more free purchasers than of late. The general demand has not as yet exhibited any improvement in response to the present aspect of the market, and the increased deliveries seem to have arisen more from special causes than from the general requirements of trade. The position of the market is deemed more satisfactory by holders, and so long as speculation is content rather to follow the tide of events than to force the current, the condition of the same will continue sound, but there is always a fear that when anything like vitality is restored there may be undue speculation, which is certain ultimately to upset the balance. It is well not to lose sight of the fact that we are now advancing towards a period of the year when prices, as a rule, have a tendency to recede rather than advance. Still, should advices be favourable, and trade in some measure revive, the present advance may be more than maintained. The Board of Trade returns for the first four months of the year show the exports and imports of copper produce, as compared with the same periods of the two preceding years, to be as follows:—

EXPORTS.	1874.	1873.	1872.
Foreign raw	7,043	6,718	2,731
English ditto	2,976	5,365	3,030
Manufactured, including Yellow Metal	7,311	7,046	6,332
IMPORTS.			
Ore	15,492	17,488	16,844
Regulus	8,283	9,812	11,549
Copper	14,815	10,185	14,813

In the early part of the week the price of regulus rose 15s. to 16s. 3d. per unit, and Chili bars, g.o.b., changed hands at 74 $\frac{1}{2}$  to 75 $\frac{1}{2}$  10s., and Wallaroo 87 $\frac{1}{2}$  to 88 $\frac{1}{2}$  10s. The week advanced so did the price of copper, the demand showing a steady daily improvement. Barra is now quoted 86 $\frac{1}{2}$  to 87 $\frac{1}{2}$  10s., English tough 82 $\frac{1}{2}$  to 83 $\frac{1}{2}$  10s., best selected 84 $\frac{1}{2}$  to 85 $\frac{1}{2}$  10s., and strong sheets 92 $\frac{1}{2}$ . The market closes with Chili bars, g.o.b., 77 $\frac{1}{2}$  10s. to 78 $\frac{1}{2}$  10s. sellers. The standard during the week has advanced about 3s. per ton. Yellow Metal orders for 4 by 4 sheets and 4 by 4 sheathing continue to be taken at 7 3/4 d. per lb.; one or two houses of marked brands ask a little more.

**IRON.**—Attention is directed to a very great extent to the course which shall be adopted in the North of England, and especially in the Cleveland district at the present time. Were it possible to bring matters between masters and men to a satisfactory conclusion, then there would be hope of solution of similar difficulties in other parts of the country. Unhappily, the aspect of affairs is by no means encouraging. The reports from Middlesbrough announce that Mr. Grievs, the secretary of the miners, has issued during last week a circular to the various sections of the society, requesting the votes of the miners upon the question of compromise. In accordance with the invitation of the secretary, meetings have been held in the various centres, and the result of the votes taken has been unanimous, and is to the effect that the men will not return to work except at the old rates of wages. It appears that this determination has been arrived at upon the supposition on the part of the men that the strike having continued for nearly a month the masters will not allow another month to be entered upon without coming to an understanding with the men. There can be no doubt that the condition of affairs is serious enough to both masters and men, but the latter are grievously mistaken if they suppose that the masters will be constrained to submit to terms held out by the men. Were they even disposed to do so the matter is a practical impossibility, unless they were bent upon effecting their own ruin as speedily as possible. The fact is that the masters are determined to resist what they deem to be unjust to both the men and themselves, and a reduction in the rate of wage must be a *sine qua non* if the men are to return to work again. As matters now stand, the trade was, perhaps, never before so dull; buyers cannot be induced to give out their orders, and if they were sellers are unprepared to supply, except at prices which are simply prohibitory. No. 1 iron is quoted 84s.; No. 3, 73s.; No. 4, 68s. There is very little doing in the finished iron trade. In ordinary times there is a great deal doing in railway material, but at the present moment there is a sad lack of orders; and, indeed, those that are being executed are at prices which leave but a small margin of profit. During the last week many works have brought to a standstill, not so much on account of the Whitsun holidays, but because there has really been no work to do. The Darlington Iron Company (Limited) have closed their works, and the resumption of the same depends very much upon the turn of future events.

The only branch of trade which now shows the slightest indication of activity is that connected with the shipbuilding trade, for which there is some demand. Rails, 2 $\frac{1}{2}$  2s. 6d.; plates, 10 $\frac{1}{2}$  7s.; merchant bars, 9 $\frac{1}{2}$  10s.; puddled bars, 8 $\frac{1}{2}$  10s. The Scotch pig-iron market, which closed last week at 88s. 9d., opened firm on Monday, and prices speedily advanced to 91s., and business was done up to 93s.; at the close there were buyers reported at 93s. 3d., and sellers at 93s. 6d. On Tuesday there was a further advance, and transactions took place up to 94s. 9d., after which prices

receded somewhat, and at the close there were buyers at 93s. 6d. On Wednesday a further improvement was reported, which advanced the price to 94s. Yesterday the market receded, the closing quotation being 94s. To day it is 93s. 6d. for mixed numbers, cash. The advance in prices during the week must not be viewed as an indication of any improvement in the actual condition of trade, but merely arising from a speculative movement based upon small supplies and short reports. Reports are circulated to the effect that renewed activity in the manufacture of pig-iron may speedily be looked for, and that the make, which is now reduced to a very low ebb, will soon become greater. If this step is taken in a well-timed anticipation of the springing up of increased demand it will be a happy circumstance in the fortunes of the Scotch pig-iron trade, which is at present in a most unhappy condition.

#### SHIPMENTS.

Week ending May 31, 1873	Tons	16,880
Week ending May 30, 1874	Tons	7,018
Total decrease since Dec. 25, 1873	Tons	9,862

**LEAD.**—Throughout the week the market has been very firm, and although no important change in values has been established the tendency is towards an advance. Good soft English pig is obtainable at 21 $\frac{1}{2}$ ; sheets 5s. higher.

**SPELTER.**—Silesian is quoted 22 $\frac{1}{2}$  2s. 6d. to 22 $\frac{1}{2}$  5s., but there is not much doing. Hard continues dull of sale. Sellers are asking 15s. **QUICKSILVER.**—There has been rather more business in this metal at 19 $\frac{1}{2}$  15s. per flask, at which price sellers are not disposed to do more than a limited business.

**TIN.**—The market opened steady, and has continued so throughout the week. The price of Straits has not undergone any great variation, but the present appearance is towards higher quotations. The stock of Straits tin in London at the end of the first five months of this year was as follows:—January, 2330 tons; February, 2187 tons; March, 1977 tons; April, 2480 tons; May, 2383 tons.

**TIN PLATES.**—The state of this market continues unchanged.

The MINING SHARE MARKET, which was rather active last week, in anticipation of the Banca sale of tin, opened less firm this week, and for some days very little business was transacted, but towards the close a better feeling prevailed, and there was a good enquiry for tin mines at advanced prices, and the demand was much greater than the supply.

The Share Market seems just now to rise and fall with the fluctuations in tin; and it is satisfactory to many, therefore, to be told on authority that Queensland will send home this year very little more than half the quantity she sent home last, and that Australian tin cannot usually be sent here at a profit under 80 $\frac{1}{2}$  per ton; better prices for English tin must, therefore, soon follow.

The mines chiefly dealt in this week have embraced Carn Brea, Dolcoath, Tincroft, Wheal Pevor, Tankerville, West Tankerville, Prince of Wales, Old Bottle Hill, Roman Gravelly, Van Consols, South Condurrow, Great Laxey, Old Treburgett, Penstruthal, Kitty (St. Agnes), Pevor, and a few others.

Carn Brea soon after our last receded from 67 $\frac{1}{2}$  to 60, but on Thursday a demand again sprung up for them, and they leave off 65 to 70. Dolcoaths in good demand at 47 to 49; Tincroft, 31 to 33; Cock's Kitchen, 9 $\frac{1}{2}$  to 10; East Lovell, 12 $\frac{1}{2}$  to 13 $\frac{1}{2}$ ; West Bassett, 10 $\frac{1}{2}$  to 11 $\frac{1}{2}$ ; Wheal Kitty (St. Agnes), 8 to 8 $\frac{1}{2}$ ; Wheal Pevor, 3 to 3 $\frac{1}{2}$ ; South Condurrow, 3 $\frac{1}{2}$  to 4; South Carn Brea, 3 to 3 $\frac{1}{2}$ ; Old Bottle Hill, 14 to 24; Wheal Bassett, 25 to 27 $\frac{1}{2}$ ; Wheal Grenville, 4 $\frac{1}{2}$  to 5 $\frac{1}{2}$ . Van, 27 to 30; the sale for the month of May realised 6326 $\frac{1}{2}$  5s.—450 tons of lead at 13 $\frac{1}{2}$  5s. 6d.—5973 $\frac{1}{2}$  15s.; and 150 tons of blende, 352 $\frac{1}{2}$  10s. Van Consols, 4 $\frac{1}{2}$  to 4 $\frac{3}{4}$ ; the report says that the lode in the mine continues worth 10 tons of lead ore per fathom. The lode east and west of same worth respectively 7 and 8 tons of lead ore per fath. Bog, 17s. 6d. to 22s. 6d.; Devon Great Consols, 12s. 6d. to 15s.; East Caradon, 3 to 3 $\frac{1}{2}$ ; East Pool, 10 to 11; East Van, 25s. to 30s.; Great Laxey, 11 $\frac{1}{2}$  to 12 $\frac{1}{2}$ ; Great Wheal Vor, 12s. 6d. to 17s. 6d.; Kingston Down, 3 to 1.

Old Treburgett, 15s. to 17s. 6d.; the mine has sampled 60 tons of rich silver-lead ore for the month, estimated to produce about 1700 $\frac{1}{2}$ . South Treburgett, par to 4 prem.; the shares in this company, we understand, are offered in the first instance to the shareholders in Old Treburgett, and those not taken by them will be allotted to the public. The mine, according to the reports of several agents, has yielded large quantities of silver-lead ore above the adit, but has never been worked below it. A portable engine will, therefore, be put to work at once to sink the lode below the adit level, and immediate returns are expected. Old Treburgett, it is well known, paid over 70,000 $\frac{1}{2}$  in dividends from shallow levels before the present company took up the mine, and it is now 80 fms. deep, with the lode becoming richer for silver as it goes down. In South Treburgett the presumption is that it will be equally rich at shallow levels as it was in Old Treburgett, and that the ore will be got into at once. Marke Valley, 3 to 3 $\frac{1}{2}$ ; Pennerley, 24s. to 28s.; Penstruthal, 13s. to 15s.; Prince of Wales, 12s. to 14s.; Providence Mines, 2 $\frac{1}{2}$  to 3.

Pedin-andrea; the accounts for twelve months show a balance against the company of 8492 $\frac{1}{2}$  19s. 11d., and a call of 1 $\frac{1}{2}$  per share (10,000 $\frac{1}{2}$ ) has been made. It is said that the mine can pay cost with tin at 55 $\frac{1}{2}$  per ton. The tin sold from July 1, 1873, to May 1, 1874, was 257 tons. Wheal Bassett and Grylls; at the meeting a call of 10s. per share was made, the loss on the four months' working, caused by the fall in tin, was 629 $\frac{1}{2}$ . The tin sold in four months, 43 tons, realised 2160 $\frac{1}{2}$ . South Caradon, 65 to 75. South Crofty, 15 to 17; South Frances, 12 to 14. West Tolgus, 57 to 59; the lode in the 125 end west is worth 9 tons of copper ore per fathom, the rise in back of same level, 5 tons. In the 85 end the lode is worth 10 tons per fathom. Roman Gravelly, 16 to 16 $\frac{1}{2}$ ; Rookhope Valley, 15s. to 20s.; South Roman Gravelly, 10s. to 12s. 6d.; St. Ives Consols, 10 to 12; Tankerville, 9 $\frac{1}{2}$  to 9 $\frac{3}{4}$ ; West Chiverton, 2 to 2 $\frac{1}{2}$ ; West Frances 15 to 14; West Maria and Fortescue, 9 to 11; West Seton, 30 to 35; West Tankerville, 13 to 14 $\frac{1}{2}$ ; Wheal Ury, 2 $\frac{1}{2}$  to 2 $\frac{3}{4}$ ; West Esgrill Le, 2 $\frac{$



as against 48,200 in 1873, and 40,800 in 1872. Lead is firmer, with a steady demand. Spelter continues comparatively dull.

Richmond Consolidated, 63 to 7; cable received, week's run \$35,000, two furnaces. At the corresponding date last year the highest result obtained from two furnaces was \$28,000, the present this rate of increase in the returns can be maintained, the delay this year in starting will soon be made up. The adit from the main out-shaft has, we learn, been completed, and the ore body reached. This work has been a longer time in hand than was expected, owing to the intervention between the ore and the hoisting shaft of very hard rock; this having now been pierced the labour in future of extracting the ore will be greatly diminished. The Eureka Centennial, of May 14, states that "A pack train from Silverado district yesterday brought in a large quantity of ore from that place, delivering it at the Richmond furnaces for smelting." The Daily Cupel, of May 11, names the forwarding by Pritchard's team of 20,022 lbs. of bullion from the Richmond works. A member of the board left for Eureka on Friday. The contemplated refining works will take some two or three months to complete, but they will be in time to have the full benefit from them ere the close of the year. It is evident that a large and profitable business may be done in smelting and refining ores from the numerous small mines in the district. A great advantage will result from this cause by the opportunity thus afforded of selecting ores to increase the produce from the Richmond ores, and preventing the waste which at present exists. Independent of the probable increase in the future resources of the mine there is a wide field open in economising the existing produce. Eureka Consolidated paid for May a dividend of \$50,000 (\$1 per share), the first paid since last September. Eberhart and Aurora, 34 to 35. Mineral Hill raised for the week ending May 11, 65 tons of ore of an average grade of 48 per cent, at a cost of \$906. New Pacific, 7s. 6d. to 10s.; the agent is still carrying on the necessary underground works, and is raising a little rich ore.

Emma shares are unaltered at 24 to 25; the members of the late committee of conference have addressed the shareholders, informing them that the last meeting was controlled by certain members of the Stock Exchange, a majority of whom had only recently acquired their interest in the company; these gentlemen professing opinions opposed to those entertained by the late committee of conference, succeeded in electing one member as their nominee on the board of direction, and in adjourning the meeting till Tuesday next, for the purpose, among other matters, of electing another director. For reasons which are apparent, it is to be regretted, that the Articles of Association grant to all shareholders power to vote without reference to the period of holding their shares; the committee, therefore, desire the assistance of the shareholders towards arresting any undue exercise of such power by the gentlemen referred to, and, in vindicating the right of such shareholders who have had a more permanent interest in the company to their legitimate voice in controlling its affairs; the "independent management," which these gentlemen desire, can only, in the present state of the company's affairs, result in fresh complication, and possibly, further disasters. Flagstaff, 44 to 45; Last Chance shares are flatter at 13 to 24; Tecoma, 14 to 15; it appears that the vendor refused to enter into negotiations with the board until the personalities indulged in by the newly-appointed chairman had been withdrawn, and the result has been that this gentleman has tendered his resignation. Utah, 14 to 15; the agent telegraphed that on Monday he started the dressing machinery regularly, and that everything was working first rate.

Blue Tent, 5 to 5 1/2; Col. Tozer cables the result of a run of 11 days on the Enterprise claim, resulting in a profit of \$3000. This is exceedingly good; the shortness of the run is accounted for by his endeavour to clean up as near the end of each month as possible. The last run was telegraphed here on May 12. Cedar Creek, 24 to 25; a very interesting letter will be found in another column, in which Col. Ludlum explains the reason of his inability to commence washing so soon as some of the adjoining companies. A telegram received during the week announces that the Yankee tunnel was past the shaft; this is good news, as washing can shortly be commenced through same. The result of last month's claim will be telegraphed about the 12th inst. Birdseye Creek, 34 to 35; washing going on as usual. The superintendent anticipates a better return from the new and west claim this run. He had been able to make wonderful progress with the Pechey shaft and tunnel. Saw-etland Creek, 44 to 45; there is no particular change reported. Mr. McLean has been hindered in the work a little by a rise in the bed-rock, thus preventing him washing steadily on the channel. He was in hopes that he would soon be able to surmount the obstruction.

Advices received by the last West India mails from the Colombian mines report continued good progress and steady profits, and there has been a fair amount of business in the shares. Western Andes, par to 1 prem.; the largest profit yet made at this mine was made for the month of April, being 2335. The reports are even more favourable than those previously received. Tolima, 3 to 4; the profit for the months of February and March inclusive was 3543. A further improvement at the bottom of the mine is reported to have taken place. Malpas, 2 to 1; the new ditch works were being pushed on, and it is expected that the cost will be less than was at first anticipated, and the work will be done in less time. Malabar, 2 to 2 1/2; the superintendent expected to have everything finished, and be ready to wash by the end of April. Rica, 2 to 2 1/2; washing was about to recommence, as the wet season had set in.

Rio Tinto, 8 1/2 to 9; from the details of the meeting, which appear in another column, it will be seen that the negotiations have not yet been concluded with the Spanish Government with reference to the obligations given on behalf of the company for the remainder of the purchase-money; but a complete report will be forwarded to the shareholders as soon as the business has been settled. At present all the works at the mine are of a preparatory nature; there are 1067 men employed, and the removal of the over-burden is going forward in the most satisfactory manner, at the rate of 500 cubic metres per day. The railway is making good progress, and a contract has been made for the erection of an iron pier in the heart of Huéla. The latest advices state that the output, which is at present confined to the production of precipitate of copper, has been increased from the amount which the Spaniards were able to produce—11 tons per month—to at first 40 tons of metallic copper, and at the present time 180 tons. It is satisfactory to learn that the province of Huéla has not been disturbed by any political movement. Confidence is entertained that the expectations held out at the formation of the company will be more than realised by actual results. Cape Copper, 28 1/2 to 29; 640 tons of ore were sold by public ticketing on May 26, at an average of 15s. 3d. to 15s. 9d. per unit, realising approximately 15,200; and 314 tons have been sampled for sale by public ticketing on June 23.

Almadá and Tiritó, 2 to 2 1/2; the report of the general meeting appears in another column. Letters have been received giving favourable accounts both of Mina Grande and the present stopping ground, but states that water is very scarce. This will account for the small profit during Apr. as announced in the telegram of May 18, which gives \$2564 only, 33 1/2. Frontino and Bolivia, 2 to 2 1/2; advices have been received, with a remittance of 736 ozs. of gold dust, valued at 16957.

St. John del Rey stock has further advanced, and close 255 to 265; for the second division of April (15 days) the produce amounted to 10,220 oits. (1178 ozs.), the average yield per ton of quartz having exceeded 8 oits. per ton. Don Pedro, 2 to 2 1/2 dis.; the produce for April is estimated at 5200 oits., against 1606 for the corresponding period of last year. Rosa Grande, 2 to 2 1/2; the first 20 days' stamping during April produced 1003 oits., and the return for the month is estimated at 1500 oits.

The Pontgibaud Company have notified the payment of an instalment of 25 frs. per share, on account of the dividend for 1873 74.

Van, 27 1/2 to 32 1/2; the usual monthly report appears in another column. It will be seen therefrom that the mine is very much improving as the levels are extended westward. The four-weekly sale took place on Thursday—450 tons of lead and 150 tons of blende, realising 63207 5s. Van Consols, 4 1/2 to 4 3/4; these shares have been largely dealt in. The reports from the mine are exceedingly good.

The lode in the winze is producing 10 tons of lead, in the two ends 7 and 8 tons respectively, and the stopes their usual quantities of ore. The last parcel of ore was sold April 27, 50 tons; on Tuesday next 100 tons of lead will be sampled. The manager, writing on the 2d inst., says, "There are very fine stones of lead in the main shaft, which is now down 10 fms. under the 15. I believe the next level will open a course of ore that will cause great excitement." A cross-cut will be immediately put out to intersect the lode at this point, which will be reached in a few fathoms. Lead has already made its appearance in the shaft. Tankerville shares continue to be absorbed, and are already at 9 1/2 to 9 3/4; the report, which appears in another column, is the most favourable ever received from the mine. Bog, 2 to 2 1/2; the driving of the bottom levels, east and west, is progressing very well. There is no change in the value of the different ends. Pennerley, 1 1/2 to 1 3/4; the lode in the winze, below the 70, is worth 25s. per fm. Other parcels of the mine much the same.

Penstru has somewhat flatter, at 14s. to 15s.; regular sales of ore will commence here in a month's time.

Subjoined are the closing quotations:—  
Bog, 2 to 2 1/2; Carn Brea, 64 to 66; Cook's Kitchen, 9 1/2 to 10; Devon Great Consols, 12 1/2 to 13; Doonagh, 48 to 49; East Caridon, 5 1/2 to 5 3/4; East Lovell, 12 1/2 to 13 1/2; East Van, 1 1/2 to 1 3/4; Great Laxey, 11 1/2 to 12; Great Wheel Vor, 5 1/2 to 5 3/4; Hingham Down, 14 to 15; Marke Valley, 1 1/2 to 1; Pennerley, 1 1/2 to 1 3/4; Perkins Beach, 2 1/2 to 3; Penrhyntalyha, 13s. to 15s.; Roman Gravel, 16 to 16 1/2; South Caradon, 3 to 3 1/2; Tincro, 30 1/2 to 31 1/2; Tankerville, 9 to 9 1/2; Van, 27 1/2 to 32 1/2; West Tankerville, 1 1/2 to 1 3/4; West Basset, 10 1/2 to 11; West Chiverton, 2 to 2 1/2; West Consols, 2 1/2 to 3; Wheel Grevy, 5 to 5 1/2; Almadá and Tiritó, 2 to 2 1/2; Birdseye Creek, 34 to 35; Cedar Creek, 24 to 25; Cape Copper, 28 1/2 to 29; Chontales, 14 to 15; Don Pedro, 2 to 2 1/2 dis.; Eberhart and Aurora, 34 to 35; Emma, 24 to 25; Flagstaff, 44 to 45; Frontino and Bolivia, 2 to 2 1/2; Last Chance, 13 to 24; Malpas, 2 to 1; Malabar, 2 to 2 1/2; New Pacific, 7s. 6d. to 10s.; New Quebrada, 3 to 3 1/2; Port Phillip, 7s. to 8s.; Rio Tinto, 8 1/2 to 9; Rica, 2 to 2 1/2; Richmond Consolidated, 63 to 65; Sweetland Creek, 44 to 45; St. John del Rey, 255 to 265; Sierra Buttes, 24 to 25; San Pedro, 2 to 2 1/2; Utah, 14 to 15; United Mexican, 4 1/2 to 4 3/4; Independence, 2 1/2 to 2 3/4; West Esair Lde, 24 to 25; New Zealand Kapanga, 4 1/2 to 5; Blue Tent, 5 to 5 1/2; Holcombe Valley, 2 to 2 1/2.

COLLIERIES AND IRON COMPANIES.—The Derby Day has at most times exercised an important influence on the Stock Markets, and this year proved no exception to the rule, only a moderate amount of business having been transacted. Nant-y-Glo and Blaitha have partly recovered from last week's depression. Cleve Hills are being offered at 9s. and 9s. 6d., but met with little or no response. The shares attracting principal attention have been Cardiff and Swansea, Newport Abercrombie, Welsh Freehold, New Sharlston, United Bituminous, Chapel House, Ifton Rhyn, Rhynney, Merry and Cuninghame, Ebbw Vale, Darlington Iron, Thorpe's Gawber, and Marbella. The directors of the Original Hartlepool Colliery have had some considerable trouble with their men living at Thornley, Wheatley Hill, and Ludworth, to the number of 1200, who appear determined to stand out against the 11 days per fortnight system, and at the same time hesitate to deliver up possession of their cottages, the property of the company. Several have been ejected by force. Cardiff and Swansea, 3 1/2 to 4 1/2; Welsh Freehold, 3 1/2 to 4 1/2; Chapel House, 4 1/2 to 5; Marbella, 4 1/2 to 5. Although the shares of the Albion Steel and Wire Company stand in the market at a very heavy discount, the directors have succeeded in obtaining assistance to the extent of over 20,000, in the form of debentures, which will enable them to carry on the works. It was stated at a recent meeting, held at the Cutler's Hall, Sheffield, that the deed of compromise between the vendors and the shareholders would have been completed some time past but for a difficulty occasioned by three shareholders, holding 95 shares, declining to sign the deed. Hopkins, Gilkes, and Co., 5 1/2 to 6; Ebbw Vale, 5 1/2 to 5 3/4; John Brown and Co., 2 1/2 to 2 3/4; Palmer's Shipbuilding, 15 to 17 1/2; Merry and Cuninghame, 3 1/2 to 3 3/4. The question of a quotation for the shares of the Bonville's Court Coal Company, which was postponed some little time ago, has now been settled by the Stock Exchange Committee granting the same. At the Ironmasters' Meeting, on Wednesday, at Wolverhampton, there was a heavy drop in finished iron, bars in some instances being quoted as low as 10 guineas. The Barrow Field Company are re-lighting one of their blast-furnaces, and the Messrs. Bradley announce that they are again open to receive finished iron orders. Both are largely supplied with non-Union men; the others are still on strike. Darlington Iron, 8 1/2 to 9 1/2; Thorpe's Gawber, 15 to 16; Ifton Rhyn, 40s. to 50s. Mr. Thomas Richardson, M.P., has disposed of his rolling-mills and blast-furnaces to a limited company, styled the West Hartlepool Iron Company (Limited), and guarantees 10 per cent. dividend for five years. The capital is fixed at 300,000, in 500 shares. The district is still suffering from a scarcity of iron ores, although large quantities are being forwarded from Cornwall, Lincolnshire, and Leicestershire. The Cleveland mineowners have now informed the men that if work is not resumed before Tuesday a larger reduction will be enforced than is now proposed. Newport Abercrombie, 3 1/2 to 3 3/4; the second general meeting was held to-day, when the directors' report was adopted. The buildings necessary to so large an undertaking are in a great measure completed, a railway siding has been laid down, and 45 miners' cottages erected. From their advantageous position on the great coal basin, the company will eventually have one of the largest outputs of any colliery in South Wales; and in view of this they are sinking one of the largest shafts in the world, which is now approaching a depth of 60 yards from the surface. The shares are firmly held, and seldom come in the market; when the allotment was originally made the directors were obliged to refuse applications for more than 4000 shares over and above the number to be allotted.

At Redruth Ticketing, on Thursday, 1731 tons of copper ore were sold, realising 92937 13s. 6d. The particulars of the sale were—Average standard, 101 1/4; average produce, 8; average price per ton, 57 7s. 6d.; quantity of fine copper, 138 tons 4 cwt. The following are the particulars of the sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
May 7.	986	100	12	0	7	24 4 0
May 21.	3386	103	14	0	6 1/2	12 0
June 4.	1731	101	14	0	8	5 7 6

Compared with the last sale, the advance has been in the standard 3/4, and in the price per ton of ore about 4s. 6d.

The WIGGINTON HALL COLLIERY COMPANY, to the formation of which with a capital of 30,000, in shares of 5s. each, to purchase and work a freehold coal and fire-clay property near Chirk station, Salop, reference was made a fortnight since, have given notice that the list of applications for shares will be closed on Saturday next. The prospectus will be found in another column. It is understood that the applications have been numerous.

The EAST AND WEST JUNCTION RAILWAY COMPANY (Towcester to Stratford-on-Avon) are inviting subscriptions at 9s. per cent. for 30,000 PERPETUAL FIVE PER CENT. FIRST DEBENTURE STOCK, a portion of 400,000, authorised, the whole being the first mortgage charge upon the entire undertaking. The line is now open for traffic, and forms junctions with the London and North-Western, Great Western, and Midland systems. As a guarantee for the due and punctual payment of interest for two years until July 1, 1875 (thus allowing ample time for the development of the resources of the line), the whole of the interest payable during that time has been deposited in the name of trustees with Messrs. Smith, Payne, and Smiths. By the route afforded by this railway the distance for through passenger, goods, and mineral traffic from the South Wales coal-fields, Hereford, Worcester, and Gloucester, via Birmingham and Dudley, to Northampton Iron ore district is shortened by about 25 miles, and this reduction in distance will secure a large through mineral traffic over this line, both in iron ore to Wales and in coal from Wales to the above district, and also to London, whilst by means of the Evesham, Redditch, and Stratford-on-Avon Junction Railway, when completed, the additional advantage of competing routes, by means of the Midland Railway to the Birmingham and Midland Districts, South Wales, and Gloucester, Cheltenham, Bristol, and Bath, added to the advantage of the unbroken narrow gauge through communication with the West and South of England, cannot fail to be productive of a very large additional increase in the traffic returns, independently of the construction of the link between Blisworth and Northampton. Considerable progress has been made towards developing the iron ore deposits in the neighbourhood of the line, operations having been actively commenced on several properties. In one instance the lessee has constructed at his own cost a branch railway of about two miles in length, and he, as well as other mineowners, have already begun consigning iron ore both to South Wales and Staffordshire. Other similar works of an extensive character are in contemplation. The amount required annually to pay the interest on the authorised first debenture stock, all of which has been issued, and of which the 30,000, now offered for sale, is 20,000. A careful estimate made some little time since by the directors of the company of the minimum net revenue from passengers, goods, and mineral traffic, when developed, by the present existing route, shows a surplus of nearly 12,000 after payment of the above-mentioned interest, whilst the guarantee be-

fore mentioned for payment of interest indicates the confidence felt in the soundness and success of the undertaking. The prospectus will be found in another column.

Sir Robert W. Carden and Co. are inviting subscriptions at 72 1/2 per cent. bond for 50,000 Perpetual Seven Per Cent. First Mortgage Debentures of the NORTH-WESTERN RAILWAY OF MONTE VIDEO COMPANY, the interest on which is guaranteed by the Uruguayan Government for 40 years. The issue forms part of 600,000, authorised to be raised in debentures by the company's Articles, the interest forming a first charge on the whole undertaking, and on the Government guaranteed interest, amounting to 77,000. The debentures carry the July coupon, and will yield to the investor, reckoning the accrued interest and the discount for prepayment, nearly 10 per cent. per annum. The popularity of first mortgage debentures, well secured by first mortgage on the whole of the revenues and properties of the railway, on which they are charged, with the addition of a Government guarantee of interest on the whole capital, is well established, such investments being considered very desirable. This applies especially to the bonds of the line on which the bonds now for subscription are secured, possessing as it will an estimated traffic considerably exceeding the amount of interest payable, irrespective of the Government guarantee of interest, which is nearly double the amount required, and as a solid security they offer to trustees, bankers, and others a high-class and progressive investment. The company has the power of fixing the tariff rates, but when the line shall have earned profits amounting to 10 per cent. per annum on the whole capital of 1,100,000, the tariff may be revised by the Government in accord with the company. The import and export trade, by the statement of the Government Commissioner on the issue of the last Uruguayan Loan, are shown to exceed 8,000,000 per annum, having doubled itself in ten years, and increasing at a faster rate than either that in Brazil or the Argentine Republic. A large European emigration has set steadily in, and the population is rapidly increasing, that of the capital city of Monte Video being about 120,000. As regards traffic, this must undoubtedly be very large, as the railway forms a main artery of communication with an Atlantic port, not only for the fertile department of the Silto, which it traverses, but for other States, and a large portion of Brazil. A contract has been made with Messrs. Clark, Punchard, and Curry, who commenced the works in June, 1872. The two first sections of the line, nearly 46 miles, are almost completed, and the contractors have undertaken to construct the entire railway, with stations, rolling stock, telegraph, &c., in accordance with the terms of the concession, by Dec. 31, 1874. The prospectus will be found in another column.

The directors of the Caliz Waterworks Company have received official intimation that the extensive series of waterworks for supplying the City of Caliz, which owing to their magnitude have been long in hand, are on the eve of completion, and that the same will be formally opened for the public service on June 12. The event is creating considerable excitement in Caliz, and the successful inauguration of the waterworks will be celebrated by a grand banquet, which will be given by the Corporation of Caliz, and official invitations to the same have been received in London by the directors and the officers of the company. There appears every reason to believe that the undertaking will prove highly successful, the completion of the works having been anxiously looked for by the inhabitants for some time past.

The subscription lists for 87,000 deferred stock of the Bristol Port and Channel Dock Company will be closed on Saturday, the 6th instant, at Three o'clock, both for town and country applications.

ECONOMISING FUEL.—The invention of Mr. JOHN LEIGH, of Buckland, Kent, consists, firstly, of improvements in the construction and arrangement of combustion chambers applicable to any description of furnace or boiler requiring great heat; and, secondly, of improvements in the method of feeding such combustion chambers or furnaces with a regular and continuous supply of fuel, which may be either coal, coal dust, coke, coke dust, sawdust, tan, or any other description of fuel used in furnaces for the generation of certain gases by their action while in an incandescent state upon atmospheric air supplied by blast or otherwise; these gases are used as fuel and reducing agents in metallurgical and certain other operations in which high temperatures are required, such as smelting, puddling, or otherwise treating iron or iron ores, or other ores or metals, generating steam, and other similar processes.

There is now on view at Messrs. F. and C. Osler's, 45, Oxford-street, a remarkable crystal glass fountain which is about to be sent to India for His Highness the Maharajah of Patiala, G. C. S. I., by whom it has been purchased.

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## LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
May 30—Frank Mills	53	17	11 6	Nevill, Druce, & Co.
June 2—Coed Mawr Pool	13	12	1 6	Adam Eytan.
— ditto	100	21	8 0	ditto
— Great Laxey	50	13	8 0	Weston, Son, and Co.
— Van	50	13	8 0	Pantler Lead Co.
— ditto	50	13	8 0	ditto
— ditto	50	13	8 0	Sheldon, Bush, and Co.
— ditto	50	13	8 0	ditto
— ditto	50	13	8 0	Weston, Son, and Co.
— ditto	50	13	8 0	ditto
— ditto	50	13	8 0	Barry Port Company.
— Cymbyr	10	11	6 0	Glover and Robinson.
— Grogwinlon	40	12	10 0	Barry Port Company.

## BLLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
May 30—Talargoch	100	2	5 6	Kenrick and Son.
June 4—Van	150	2	7 0	Vivian and Son.

## BLACK TIN.

Date.	Mines.	Tons.	c. q. lb.	Price p. ton.	Amount.	Purchasers.
June 3—Furze Hill	5	2	3	22	—	2291 12 3—



## Notices to Correspondents.

\* Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

**COSTA RICA.**—I was glad to see, in last week's Journal, the enquiry of "A. V." respecting the Costa Rica Company. I have heard nothing of the proceedings of this company since the report of the meeting, on March 20, in which a motion was carried "that Capt. Clemen's report be printed and circulated amongst the shareholders, and that a meeting be subsequently called." I wrote lately to the secretary to enquire why this resolution had not been carried out, but no notice was taken of my letter. I think most shareholders will agree with me, that the fairest way of proceeding would be for the directors to return the money to the shareholders before any fresh adventure is agreed upon.—A SHAREHOLDER.

**NEW METHOD OF SINKING SHAFTS.**—"W. R." (Manchester).—We are not aware that Mr. Cove has any agent in this country; but a letter addressed to him at Drifton, Jeddo P.O., Luzerne, Pa., U.S.A., would, no doubt, receive attention.

**TANKVILLE.**—PENERLEY.—Permit me to address a few lines to your readers on some curious facts in the prices of the various mines. PENERLEY has for some months past been selling 75 tons of lead ore per month; the price of the shares was 2½ to 3¼, three months since that time the output of lead has been increased to 80 tons per month, and the shares, instead of advancing, drop to 1½, and the mine has in no way deteriorated, but rather improved. Tankerville Mine has been raising 75 tons of lead ore per month, being the same quantity as PENERLEY, but these shares bear the value of 9½ to 12½. The one mine (PENERLEY), therefore, is at 50 per cent. discount, the other (Tankerville) at 50 to 100 per cent. premium. The former mine has lately been dropped out of the quotations in some papers. I notice, also, many other mines, although reported to have greatly improved, the shares in which drop in price. If any reader can throw some light on these matters he would greatly oblige.—A SUBSCRIBER.

**MINING ENGINEERING.**—"E. D." (Aber Avon).—The only books likely to meet the requirements of "E. D." are Phillips' "Manual of Metallurgy," and Darlington's "Treatise on Mining and Metallurgy," both of which are out of print. Mr. John A. Phillips is, however, preparing a new edition of the former work, which, it is understood, will soon be ready.

**FALSE DIPLOMAS.**—"L. E. de St. P." (Jersey).—The University of Pennsylvania was founded about 1750 by Benjamin Franklin, and if a letter be addressed to Dr. Stillé, the Provost, at Philadelphia, he will no doubt render every assistance by sending a list of Pennsylvania universities and colleges empowered to grant degrees, and recent State legislation on the subject. "The University of Philadelphia" has, we believe, no existence; its charter, with that of several others similarly implicated in granting fraudulent degrees, having been unanimously repealed some time since by the Legislature. There are many persons in England who hold no other than Jersey "Medicus" degrees, and now that these are aware that their degrees are invalid, whether the institution purporting to confer them be in existence or not, because the American statute law has been infringed, it is not unlikely that their co-operation could be obtained if they were not ashamed to acknowledge the source of their honours. There was a case heard a few weeks since in the Wolverhampton Police Court, in which the question of holding "bogus" American diplomas was raised, but it was not stated whether it had been procured through Mr. Van der Vyver. Mr. St. P. might write to the Stipendiary of Wolverhampton, or to Dr. Freeman of the same town, who would, no doubt, inform him. The matter created quite as much interest at Wolverhampton as the similar one is now doing at Jersey.

**GREAT BARRIER.**—"W. Dyer."—The company is in course of liquidation. Captain Higgins left New Zealand six years ago.

**CERTIFICATED MANAGER.**—"D. G." (Wombwell).—There should be no difficulty in obtaining the "Certificate of Competency," if as D. G. states he has been working for nine years in mines, and would be able to pass the examination which could be passed from careful study of books published for candidates up to the fourth standard of the "Revised Code." So far from there being as he supposes a desire to exclude working men from the management of collieries, the intention of the Legislature was just the reverse—the object was to exclude all but practical men—but the misapprehension of the examining boards, or perhaps the desire not to interfere with vested interests, has thrown great discredit upon the entire system.

**TILLWYD.**—"Shareholder."—Should call at the office or write to the secretary, who will furnish the particulars required.

**STEAM FOR TRAM CARS.**—"F. A." (Barnes).—If steam were introduced as a motive power for tram cars, there can be no question that the regulations relating to the use of steam on common roads would have to be complied with, and this, we think, would necessitate reducing the speed, so that all advantage would be lost. Compressed air could, no doubt, be used with the same engine, but there might be some difficulty in carrying the cylinders of compressed air. A calorific engine might not come under the same category as steam, so far as the law is concerned, but it would be difficult to find one that would work economically, and without literally cooking the passengers.

**Received.**—"W. T. J."—"E. P." (Settle).—"R. A." (Sydney).—"R. T." (Kirkfield).—"F. K." (Runcorn). We could not publish the letter—"A Shareholder"—"Another Shareholder." A report of the meeting of the company appears in another column—"N. V."—"W. P. P."—"W. W." (Kneibworth).—"Shareholder" (Lovel).—Louis Lacroix.—J. Richardson.

**SHARE DEALING.**—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

## THE MINING JOURNAL,

### Railway and Commercial Gazette.

LONDON, JUNE 6, 1874.

#### THE MINING INTEREST, AND THE EXPLOSIVES COMMITTEE.

If we were writing, like a contributor to a daily journal, within an hour or two of the performance of the solemn farce at Westminster on Monday last, we should, perhaps, draw a lively sketch of its undoubtedly humorous incidents; but, writing as we do, after the lapse of a few days, the recollection of Mr. DISRAELI'S measured tones, the more measured language of the Right Hon. SPEAKER'S "admonition," and the general laughter of honourable members, who crowded the House at an unusually early hour, have all faded away, and left us a few bare and solid, not to say ugly, statements of fact to deal with. We shall ignore the pleasantries of the case. A brief period of time has carried us from a gay to a grave condition of thought, and we are driven to a belief that it was essentially no laughing matter which took Mr. FRANCE to the bar of the House of Commons.

The "very simple case" (to borrow a phrase from Mr. DISRAELI) is this. Mr. FRANCE addressed a letter to the Chairman of the Committee on Explosive Substances complaining that no evidence had been called by them on behalf of the great and important mining and quarry interest, although he held a representative position on its behalf, and offered his own testimony and that of two or three other gentlemen of large practical experience on the subject matter of the enquiry. This letter not, perhaps, being couched in language of strict moderation, was deemed a "breach of privilege," and its writer was called to the bar of the House to do—what? This may be a very simple question, but its answer is not so easy. What he ought to have done he assuredly did not do, for we have the opinion of the Prime Minister that his "conduct was wholly unsatisfactory," and called for a parliamentary admonition, which opinion was endorsed by every other member of the House save one—the learned member for Marylebone, Mr. FORSYTH—and the delinquent was accordingly admonished, but in so gentle a manner as never a schoolmistress was known to correct the indiscretion of a favoured pupil.

Under one view of the affair, and upon a hurried glance, this appears to be the case, but another view, and a careful survey of the record of last Monday's business, shows that all parties, except Mr. FRANCE, begged the question—the very deep and grave question—raised between that gentleman and the persons who thrust upon him such parliamentary honours. The case stands where it did before the offender was so admonished, unless it may be described as worse than it then appeared. Mr. FRANCE did what some humourist once described as a little worse than nothing. In a sort of Pickwickian fashion, he expressed regret if he had offended against the rules of the House by any undue exercise of the form of expletive in the incriminated letter, but not a word of this epistle was unconditionally withdrawn; and, on the other hand, as we think Mr. DISRAELI justly observed, "his explanation rather aggravated his previous conduct."

In this position of the affair, we ask our readers to attentively peruse the statement of Mr. FRANCE, which follows these remarks, and we think they will agree with us that this statement demands very different treatment to that which it has yet met with. Such an array of charges against public officers cannot be made anywhere beyond the "Hole in the Wall," or Hyde Park, without much damage to the public service, and we should think ruin to the reputation of either the accuser or the accused. It is a trite remark to say the House of Commons did either too much or too little herein. If Mr. FRANCE

deserves an admonition for writing an uncourteous letter to the Chairman of a Committee, he deserves to be pilloried, or have his ears nailed to a post for putting such a terrible statement into the hands of Mr. FORSYTH, unless every one of the allegations, which are specific, is capable of proof—and, as we are informed by a venerable and highly estimable officer of the House, that such pains and penalties can be awarded for breaches of privilege, it would perhaps have only been proper if Mr. FRANCE could not have established his charges to have exhibited him in such sorry plight in the Old Palace-yard, for the edification and warning of the British public.

Very seriously, however, we say that a claim to be heard by the great interest represented by Mr. FRANCE ought not to have been disregarded. This is no affair of verbal courtesy. If Mr. FRANCE had been called on his request there would, we apprehend, have been no naughty letter written, and if that offence merited the ostracism of the writer, why were not the other gentlemen called? It was an error of judgment to shut out practical wisdom, and follow the exclusive light of theorists and dilettanti witnesses, even though they were all free from the imputations of Mr. FRANCE, and of irreproachable virtue. Is it yet too late to call such testimony? We hope not. But if the Committee has closed its labours the House must see to it that an alleged bad faith or error shall not again happen as we are told occurred in passing the Nitroglycerine Act of 1869.

With regard to the personal charges made in the statement of Mr. FRANCE we speak, of course, quite impartially, and let us add, with hesitation and reserve. These accusations are not made in a hole or corner, or by an anonymous slanderer. The man who makes them holds his head in society respectfully and boldly. A Speaker's summons reaches him in due course, and he neither shirks nor evades the urgency and perils of its service. The accusations he prefers are uttered in Parliament by one of its members, a lawyer of distinction, and no denial of them is made. Parliamentary reporters take up the indictment, and send it broadcast all over the world. It is hard to suppose that Mr. FRANCE would risk the deserved punishment in person or pocket which labels of this character would entail upon him if incapable of justification; and it is as difficult to imagine men like Prof. ABEL, C.J. YOUNGHUSBAND, and Major MAJENDIE committing and conniving at—or even being so culpably negligent in numerous cases as to overlook—wrongs against the Revenue, the united services, and the public safety. The most urgent considerations of public policy demand that the statement read in the House of Commons on Monday last, and from the fair consideration of which that august body has turned a deaf, or, it may be, a contemptuous, ear, shall be submitted to a thorough investigation by some responsible and unimpeachable tribunal.

Statement of Mr. R. S. FRANCE to the House of Commons, Monday, June 1:—

**RIGHT HONOURABLE SIR.**—In the spring of 1871 a meeting of mine and quarry proprietors was held in London, for the purpose of endeavouring to secure a modification of certain clauses in the Nitroglycerine Act of 1869, a course rendered necessary through our having been entirely misled by the recital of the Act not being at all in accordance with the clauses.

At this meeting I was selected for the honourary task of conducting the correspondence with the Home Office, and the then Home Secretary recognised the position I held in a letter he forwarded to me through the honourable Member for Merionethshire. From the day that I accepted the task thus imposed me I have had a most continued struggle with the Government officials to whom I was referred, and at last it became clear that we, as mine and quarry owners, had no chance of redress unless we could bring the whole question fully and fairly before Parliament.

With this object in view, petitions were presented to Parliament during the last session, and such petitions were signed by the employers of many thousands engaged in mining and quarrying operations; and it was solely on the assurance given by the then Home Secretary that we acquiesced in the enquiry being postponed to the present session.

We were quite aware that on such an enquiry taking place the official advisers of the Government might propose considerable alterations in the existing laws relating to explosives; and that whilst we could not reasonably object to such legislative restrictions as might from time to time be found necessary, it was only due to ourselves to urge that such restrictions should not be unduly harassing. In my first letter to the Right Honourable the Chairman of the Explosives Committee I asked him, in the most courteous manner, to be allowed to give rebutting evidence in regard to several of Major Majendie's proposals; and, I also applied, through my solicitors, Messrs. Merriman and Howell, for other witnesses to be heard in corroboration of certain facts which could have been adduced. To this moment I have received no written reply to such my application; and it was with some difficulty that I obtained even a verbal refusal.

In the case of private Bills, and in which I have had a large experience, I may say that I never yet knew the Chairman of a committee refuse to hear any witness who could show even *prima facie* grounds for being allowed to give rebutting evidence; and the standing orders of both Houses prescribe the period within which a petition to be heard must be lodged.

I would humbly submit that in the case of public Bills a similar safeguard ought to exist, and any claim or request to be heard before a committee on a public measure ought not to be summarily rejected, when, as in this explosive Bill, the interests at stake are as thousands more important than the majority of those cases which are heard before committees on private Bills, inasmuch as, in this instance, the good or evil results of the particular legislation must necessarily be tested by the large employers of labour, who, I submit, have already great difficulties to contend with in the existing strikes, and general disturbance of the labour question.

It is for this reason, Sir, I humbly submit that the right honourable the Chairman of the Explosives Committee acted differently to the Chairmen of other committees, when he refused to receive rebutting testimony as regards the still further oppressive restrictions now suggested by Major Majendie. I would humbly submit, Sir, that we have had sufficient experience of the mode in which the Nitroglycerine Act was obtained to lead us most strenuously to urge that further legislation on this important subject shall not again be carried out mainly on the suggestions of interested advisers. There is the more urgent necessity for this, inasmuch as during the investigations which devolved upon me I became aware that exceedingly improper transactions lay at the root of all the grievances we have sustained under the Act of 1869, and that a full enquiry into such grievances would necessarily reveal, to a great extent, the character of such transactions as then existed, and even now exist, and by which Government officials have realised large incomes through the pecuniary interest they held, and even now hold, in the sale of the munitions of war to that department.

As one instance, amongst many others, I may state that on March 1, 1871, Col. YOUNGHUSBAND, Major MAJENDIE, and Prof. ABEL sat as members of a committee to report upon the safety of Prof. Abel's patent gunotton; and such safety having been formally recorded, Col. YOUNGHUSBAND and Prof. ABEL, in the course of a few days, signed a specification order for the sale to Government of 200 tons of gunotton, at a cost to the country of some 40,000*l.*, and out of which single transaction Prof. ABEL became entitled to no less than 2,000*l.*, by virtue of this license to Messrs. Prentice to manufacture this large quantity of gunotton. It was during the execution of this contract that the magazine at Stowmarket exploded, causing the sudden destruction of 24 persons, besides severe injuries to a much larger number. Such explosion was inevitable, seeing that Prof. ABEL was thus attempting to manufacture for Government the only explosive which could be obtained, and, at the same time, to supply all Great Britain and the colonies with gunotton for mining and quarrying purposes. In order to get rid of the difficulty arising out of this sad calamity, an important official report, which had been presented, was withheld from circulation, and since then Major Majendie has presented another report, in which most important evidence is entirely suppressed, and certain figures are substituted in lieu of those previously given by Prof. ABEL, the result of which is that Parliament has been misled as to the real cause of the disastrous loss of life resulting from that explosion. Moreover, Major Majendie in his report, justifies Prof. ABEL'S pecuniary interest in these Government contracts, on the ground that "as the patentee of this gunotton, he was naturally strongly interested in the production of a thoroughly good article."

I do not quote this case as by any means the worst which has been disclosed, inasmuch as I am quite aware that other Government officials, who are patentees, have cleared much larger sums through the sale to Government of those munitions of war which they had patented, but I quote this case of Prof. ABEL as showing that out of these Government purchases, which he himself recommended, he was entitled to receive large royalties, irrespective of some thousands per annum which he received as royalties on the sale of his gunotton for mining and quarrying purposes. I may also add that the pamphlet I published will afford sufficient details as a basis of enquiry into this class of transactions. The case of Prof. ABEL is also the more important because he has not only acted for some years as the Government adviser in respect to the admission of other explosives, but also appears in the committee-room as one of the principal advisers of the Chairman of the Explosives Committee now sitting.

Within the past three years the War Office Committee made use of my queries for carrying out most extensive experiments with the new explosives. Mr. working plant and materials were considerably destroyed, and I afforded the committee every facility they required. At the request of one of the most prominent members I afterwards carried out some highly important submarine operations near the Bristol Channel. I was only able to do all this through the Home Secretary having granted me a special license to import the explosive used. But although Col. YOUNGHUSBAND, Major MAJENDIE, and Prof. ABEL have been examined before this Explosives Committee, no mention has been made of the results of these experiments. I submit that if such results had been fairly stated before the committee it would have been made clear that, if only as regards the safety of the country, it was not a desirable step to have excluded from use all explosives except that one in which the Government adviser held a pecuniary interest. Down to the present moment the working staff of the army and navy know nothing of the use of any other explosive than gunotton.

In my second letter to the Right Honourable the Chairman of the Explosives Committee, I endeavoured to show how unlesirable it was that legislation should, in any way, be brought in aid of such a policy as that I have described. But if in that letter I made use of any term stronger than is allowed by the rules of this honourable House I most readily withdraw it. I never intended to reflect in any way upon the House of Commons, nor upon the honour of the Chairman, and I at once most cheerfully apologise if it is considered that I have done so.

I am also fully aware of the serious position in which I have placed myself if I fail to substantiate the statements I have made, and I am quite prepared to accept such responsibility. It was an extremely difficult task that was entrusted to me by those I represent, and I have to contend with an amount of official resistance totally unexpected. As a matter of courtesy to the right honourable the

Chairman, it is certainly not desirable that I should again tender my evidence to his committee; but I am at the same time prepared to prove the entire accuracy of the statements I have made whenever called upon to do so.

#### AS TO TIME BARGAINS AT COLLIERIES.

The mineowners and the colliers of West Yorkshire have done wisely. Upon the matter of wages they have entered into a time bargain for three months. There had been a dispute, which was referred to Mr. ROBERT TENNANT, M.P., for Leeds (chairman of the West Yorkshire Collieryowners' Association), and Mr. J. S. BAILY (manager of H. BRIGGS, SON, and Co., Limited), on behalf of the masters, and to Mr. ALEXANDER MACDONALD, M.P. for Stafford, and Mr. JOHN HOLMES, of Methley, on behalf of the men. The arbitrators failed to agree, and the difference went to the umpirage of Mr. RUPERT KETTLE. At the close of the first meeting, the umpire dictated the following memorandum, and the arbitrators agreed to it:—

"After having heard the representatives of both parties in the matter of the existing dispute in the West Riding colliery district, and after fully considering the present position of both colliers and mineowners in relation to present and prospective prices, I advise that a binding arrangement be entered into by which the rate of wages is settled for the next three months; and upon the unanimous request of the representatives of both parties now present I postpone my award until Tuesday, the 2nd of June next. In the meantime the mineowners and colliers are to be consulted by their representatives upon the propriety and practicability of carrying out the suggestion, and I adjourn the meeting until Tuesday, the 2nd of June, to receive their report, and, in case no agreement is arrived at, to make my award on that day, fixing the rate of reduction, which shall commence as from to-day."

Mr. TENNANT brought the subject before a meeting of his Association, and in the interest of peace the recommendation was accepted. Mr. HOLMES had done the same with the men, with pretty much a like result. When, therefore, June 2 arrived, and the umpire met both sides at Westminster Palace Hotel, very little difficulty was experienced in his drawing up a final agreement, to which both sides assented, and this is it:—

"It is agreed between ROBERT TENNANT, Esq., M.P., and JAMES S. BAILY (of H. Briggs, Son, and Co., Limited), acting on behalf of the collieryowners of the West Yorkshire district, and ALEXANDER MACDONALD, Esq., M.P., and Mr. JOHN HOLMES, of Methley, acting on behalf of the miners of that district, with the concurrence of RUPERT ALFRED KETTLE, arbitrator, that the wages of miners in the above district shall be reduced as from and after May 20 last by the rate of 12½ per cent. upon the rate of wages paid on March 31 last, upon condition that there be no further or other reduction in the said rate of wages claimed before the day, which shall be after August 20 next. And upon further condition that if any day for a further reduction be then made, and the collieryowners and miners cannot mutually agree upon the same, then the question of such a reduction and the amount thereof, if any, shall be determined by proceeding under the terms precisely the same in all respects as the present reference."

Seeing that the 10 per cent. is the first reduction to which the West Yorkshire colliers have had to submit since the ebbing of the tide of prosperity, they should think themselves happy men in having employers who will consent to such an agreement as that upon which they have now arrived. The masters have given up for three months their claim to a much greater reduction by their men than 2½ per cent. In return, they can forecast for that period, and their customers know that throughout that time it is not likely that there will be any alteration in the prices which now rule. Thus the object of the umpire should be secured, and trade in coal in West Yorkshire be steadied. For it is hardly likely that the other disturbing element will come in. At this juncture in the history of the coal trade the industry needs protection from those within its own pale. A panic amongst those who sell is greatly to be dreaded. Certainly, for three months no West Yorkshire collieryowner can rashly put down quotations, trusting to his ability to recoup himself by a further reduction in wages. Whilst arbitrating in the Cumberland coal trade, at Workington, last Friday, Mr. KETTLE made a similar suggestion.

The Member for Cockermouth, who is the chairman of the Cumberland masters, and also Mr. WILSON, another chief collieryowner there, both concurred in the advisability of the plan, but in their case saw difficulties which they thought would make it imprudent to act upon it. Their competitors in the export market for steam coal are the Scotch masters, of whose quotations they must not keep far (if at all) in advance. That they might not be found helpless if the Scotch owners should reduce prices, the Cumberland masters felt themselves compelled to decline the time-bargain suggestion. Without staying to enquire if the arrangement, had it been entered into in Cumberland, would not have been gladly accepted in Scotland, we cannot help thinking that there are other colliery districts besides West Yorkshire where, to the advantage of masters and men alike, and to the good of trade, which just now so sadly needs a steady influence, such an arrangement as that accepted on Tuesday at Westminster might be concluded.

#### THE RATING OF LEAD MINES—VALUATION OF PROPERTY BILL.

Opinions in favour of placing lead in the same category as tin and copper for rating—on the dues—have been received, we understand, from all the chief lead-producing counties, but the petitions signed to effect this object require to be written instead of printed, those already presented having been rejected because of this informality. It is most desirable that this mistake should be remedied, and fresh petitions sent to county members, as it seems probable that combined action will effect the desired object. A new form of petition is being prepared for signature in the City. Those who are taking interest in the subject in the country would do service by obtaining signatures of Chairmen of Quarter Sessions and Assessment Committees to the proposal, of which we believe they generally would approve, as they have done to the satisfaction of all parties in Derbyshire. It is merely required to convince the Local Government Board that the interest taken in this matter is general, as we understand it can already be shown that the views of mining companies are unanimous on the subject, as far as has yet been ascertained. Immediate attention must, however, be further directed to the subject, as the Bill comes on for discussion next Monday, although the clauses relating to mines, which we expect will be keenly discussed, may not come on for a night or two after the Bill is in Committee. Those who have not done so should communicate with their county members on the subject.

We have given in another column the returns for 1872 of lead, the returns for 1873 not being yet obtained on account of the late date at which the Metalliferous Mines Act orders the returns to be made. From the "Mineral Statistics of 1872," which are prepared with such great truth by Mr. R. Hunt, of the School of Mines, it appears the counties of England and Wales yield lead according to amount in the following order:—Durham and Northumberland in 1872 yielded 19,106 tons. Montgomery and Shropshire follow next with 15,445 tons. Cardiganshire is the most prolific lead-producing county in Wales after Montgomeryshire, producing 6704 tons. Derbyshire, Cornwall and Yorkshire produced about an equal amount, or between 5000 and 6000 tons. Cumberland, Denbighshire, Flintshire and the Isle of Man between 3000 and 4000 each. Carnarvonshire nearly 3000 tons. The Valuation of Property Bill does not extend to Ireland and Scotland, but we notice a question is to be asked in the House of Commons on Monday as to the reason for the omission of Ireland and Scotland from the provisions of this Act. It should clearly be understood that by the provisions of the present Government Bill lead would be subject to all county rates, and whether buildings and machinery of non-producing mines should be rateable would still be left an open question for litigation, unless the point is clearly defined to the contrary, as would be the case by the simple addition of the word "lead" to the words "tin and copper" in the Bill now before Parliament.

**COAL ON THE PACIFIC SEABOARD.**—Large discoveries of coal are stated to have been made in the neighbourhood of the lines mapped out for construction by the recently organised Southern Pacific Railroad Company. The delivery of this coal at San Francisco at a cheaper rate would greatly assist the establishment of new lines of ocean steamers from that port, and would consequently increase the prosperity of the place. The reckless way in which some Americans seem disposed, however, to cripple American railroad property has induced the Southern Pacific Railroad Company to proceed so cautiously with the development of its undertaking that at present the coal which



it could readily bring to San Francisco remains unworked. Thus it is that bad faith and disregard of the laws of credit bring with them their own punishment.

#### CERTIFICATED COLLIERY MANAGERS.

The very exceptional position in which certificated colliery managers have been placed by the provisions of the Mines Regulation Act of 1872 has led to that body taking action for the purposes of protection and defence. It was very unfortunate for the managers of coal mines that in the passage of the Bill alluded to through its various stages in both Houses of Parliament there were no memoranda for a moment appear to have considered their position, or how they were to have their duties clearly defined. The interpretation clauses of the Act clearly lay down what constitutes an owner and an "agent," but there is nothing whatever to be found in which the meaning of the term "manager" is clearly defined, although the person holding that position must be the most important official person holding that position for the safe working of the mine, as well as for the management of the surface work, machinery, &c. But it would appear that there is something like a divided power, if the Act be rightly construed, for we find that the "agent" is superior to the manager; why it should be so we are at a loss to say, whilst the responsibility does not appear to be apportioned in the same way. Certain things are to be done by the owner, agent, or manager, the carrying out of which rests entirely in the hands of the two first named or one of them, yet it may be that in the event of anything happening the responsibility and penalties would fall on the manager. Such being the case, it is not surprising that the colliery manager in nearly all parts of the kingdom, now aware of the anomalous character of their situations as laid down by the Act of Parliament relating to mines, should form associations for their protection. Yorkshire and Lancashire appear to be the first to take the initiative, and their example is being fast followed in other colliery districts. We have been favoured with a copy of the rules of the Yorkshire Association, from which we find the objects of it clearly and concisely explained. It is stated that, "owing to the increased responsibilities that are placed upon colliery managers since the passing of the Coal Mines Regulation Act, of 1872, it is considered desirable that an association should be formed to protect their interests, and defend them against all actions, judgments, penalties, &c., that may be imposed upon them, also to assist and advance each other in their profession." These objects are such as cannot fail to ensure the hearty sympathy and cordial support of our colliery managers, and there is no doubt but what we shall have a very powerful organisation of a class of men, combining intelligence with great practical experience in the management of mines, but whose claims to consideration on the part of the framers and promoters of the Bill of 1872 were overlooked. It is not intended that the association shall be in any way aggressive, for the only power of an active character vested in the council is when a member is brought before a court of justice for any act relating to his profession he will have to state his case, when it will be investigated, and if the council consider that he has discharged his duty to the best of his ability counsel shall then be employed to defend the action. We understand that a large number of members has already been enrolled, and the new combination promises to be in the highest degree successful, as it certainly deserves to be.

**NOVA SCOTIA GOVERNMENT AGENT.**—The appointment of a Government agent in England to represent the Province of Nova Scotia has remained in abeyance since the vacancy was created by the resignation of Mr. Frederick N. Gisborne, but it appears that an energetic movement is now being made to fill the office by offering it to Mr. A. HEATHERINGTON, whose labours in the past to make known the mineral resources of Nova Scotia are strong claims in his favour, should the position be one he would be free to accept. That his efforts in this direction have been advantageous to the industries of the provinces is recognised by a large number of Nova Scotians, and there is every reason to believe that his appointment would be popular, many influential men considering that his untiring exertions deserve some recognition from the Government, and that if he were Government agent in England the more rapid opening out of the mines of the province, upon which its future prosperity so much depends, would be much facilitated. We shall have great pleasure in announcing Mr. Heatherington's appointment to and acceptance of the office.

**AN AMERICAN COAL-CUTTING MACHINE.**—THE MONITOR COAL CUTTER.—The machine invented by Mr. Horace F. Brown, of Cincinnati, has, it appears, been very successful in America. It occupies but a small space, and is but 27 in. high. It is run by compressed air or steam, carried into the mine in an iron pipe, terminating in a flexible hose of rubber, so as to permit freedom of motion in the machine. The cutting arrangement is an iron rim of 4 ft. diameter, covered with moveable steel teeth about 12 in. apart. These teeth can be taken out and ground when dull. This rim lies on small wheels, which support it, and allows a free motion, and has cogs on its under surface, which work into cogs on a shaft turned by the engine. The power is thus applied near the circumference of the wheel, instead of at the centre, as in the ordinary circular saw. The cutter can be put in to a depth of 3 ft. 6 in., or seven-eighths of its whole diameter, whereas the ordinary saw can cut barely to one-half its usual diameter. The machine runs on a moveable track, and is fed by means of a screw working in the cogs. It will cut a yard in five minutes, and the inventor claims that with it two men can cut 100 tons of coal in 24 hours.

**COAL-CUTTING MACHINES.**—At the Chesterfield and Derbyshire Institute of Mining, Civil, and Mechanical Engineers' meeting, on Thursday, Mr. Evans intimated that at present he did not think the coal-cutting machines worked successfully.—Capt. Jackson said he had heard from Mr. McDermott that he could make a hand machine whereby one man would be able to do the work of three. The machine would not be so expensive or so cumbersome as the other machines.—Mr. Howe did not think it proper for a report like that to go on, as he could not imagine how such a machine could do the work of three men.—After some further discussion on the merits of coal-cutting machines, the meeting passed a vote of thanks to Mr. R. F. Martin for his paper "On Coal-Cutting Machinery," and also to Messrs. Oliver for allowing the use of the foundry yard to enable them to view the engines at work.

**COMPARATIVE TESTS OF SAFETY-LAMPS.**—An interesting series of experiments has just been completed in the laboratory of the City Gas Examiner's office, by Prof. Charles Heisch, F.C.S., of the Middlesex Hospital Medical College, the superintending gas examiner, for the object of comparing the amount of light given by the different forms of lamps patented by Mr. William Yates, C.E., of Princes-street, Storey's Gate, Westminster, and the Davy and Clanny lamps respectively. Each lamp was trimmed so as to give the best light, and account was then taken of the number of grains of oil consumed per hour, of the light given as compared with a standard sperm candle burning 100 grains per hour; the percentage of light and the percentage of oil. The light of the candle being taken as 100, it was found that—1, the Davy lamp burning colza oil gave 190 per cent. of light per 100 grains consumed; 2, the Clanny, 1283 per cent.; 3, the all-round Yates, 1322 per cent.; 4, the reflector Yates, 1476 per cent.; and, 5, the chimney Yates, 1283. Professor Heisch remarks that none of the lamps seem well adapted for use with colza oil, the Davy especially almost refused to burn. With whale oil, the experiments being otherwise similar, the first lamp gave 541 per cent.; the second, 996 per cent.; the third, 2001; the fourth, 2000; and the fifth, 1704 per cent. of light. And with seal oil the first gave 631 per cent.; the second, 1250 per cent.; the third, 2188; the fourth, 2267; and the fifth, 1254 per cent. of light. With regard to the several forms of Yates lamp it should be mentioned that the "all-round" lamp is so called because it is made with a peculiarly shaped glass, which intensifies the light and gives it off on all sides; the reflector lamp is constructed with a lens and reflector; and the chimney-lamp is the same as the last named, with

the addition of an inner funnel or chimney. Prof. Heisch states the all-round Yates seems to him at present the best lamp, which he thinks is due to a much larger space around the wick permitting a more free access of air, and giving a better vent for the products of combustion. The lamp with a chimney has a tendency to re-burn the products of combustion down on to the flame, and to cause it to smoke and dirty the glass much sooner. In round numbers, he continues, the Yates lamp gives for equal consumption of oil twice the light of the Clanny and four times that of the Davy.

#### REPORT FROM CORNWALL.

June 4.—Another week has passed without any change in the tin standard, and it must be confessed that the result of the Banca sale seems somewhat to have delayed the rise that we were anticipating. Still, however, the future is regarded with confidence, and wise men will be careful in their dealings. Railway matters in connection with the county have absorbed a good deal of attention of late, and at Wharfedale meetings of the various companies interested have been held to consider the Bills which are now before Parliament. The Teign Valley Railway Bill has been dropped. This is much to be regretted, for it would open up a promising mining as well as an agricultural district. Assent has been given on the part of the broad gauge companies to the Bill for conferring further powers on the Truro and Perran Minerals Railway Company, and to the Bill for the Fal Valley line, the extension of which to St. Just Pool has been abandoned. The arrangement entered into by the Cornwall with the Truro and Perran and Fal Valley Companies is briefly this:—The Cornwall Company are to construct a line from the Crow Hill Viaduct about two miles up the Fal Valley, and the Minerals Company will come to meet them there. Mutual running powers are to be given, and the Minerals Company will come to the Cornwall line at Truro. On Monday the most practical form of denial was given to the many untoward prophecies which have been uttered respecting the Cornwall Minerals Railway, for on that day it was opened for traffic. There was an accident to a day train on the previous Saturday on the incline near Pontomill, caused by the train descending at too great a speed and the snapping of a rail. The train went off the line, and some of the trucks were completely smashed. However, none of the men who were in charge of the train were seriously injured, and the debris was cleared away in good time for the opening on Monday morning. The first train was started from the station at Par about six o'clock by Mr. Richardson, the general manager, who was accompanied by a number of the staff, and the carriage of iron ore and clay has now fairly commenced. The line will not be opened for passenger traffic for about six months, by which time all the arrangements for passenger accommodation will have been made, and everything be in thorough working order. There was no ceremony or demonstration at the opening. It was a purely business matter, conducted in a thorough business way, but hereafter we may expect to see the auspicious event—for auspicious, especially to Central Cornwall, it unmistakably is—celebrated in a belittling manner. There is to be a very pleasant excursion over the line on Saturday, which has been organised in connection with the visit of the Royal Cornwall Agricultural Society to St. Austell. By the kindness of Mr. Roebuck, a train is to be run all over the railway on that day, up to the Perran iron mines, where—another instance among many of that gentleman's courtesy—the party, in number about 100, will find luncheon awaiting them.

One does not look to an agricultural exhibition, as a rule, to find matters which are specially connected with mining. But the Royal Cornwall meeting at St. Austell, must be reckoned an exception, for one of the most prominent features in its mechanical department is the stone-breaker sent by Mr. Marsden, of Leeds, the gigantic cubing jaw of which has been crunched up during the show, with the greatest ease, the toughest rock to be found in the neighbourhood. Thanks to Captain Teague and others, the stone-breaker has been introduced into Cornish mining industry; but where there are units there might with advantage be scores. It is employed with the best results at St. Austell in breaking up stone for metallising, and on the Cornwall Railway in preparing ballast; and yet in the West it is hardly known.

Boscawell Downs seems likely to be fruitful in mining precedents. The other day it was decided, in connection therewith, that a miner's priority of claim for wages does not extend to the costs he may incur in enforcing that claim. Now, Mr. T. Cornish has applied to the Vice-Warden, on behalf of the lords of the mine, for priority of proof and payment before other creditors, and especially before debenture holders, concerning whom he contended, they could not occupy a better position than that of an ordinary mortgagee, the debenture holder being simply a mortgagee of only that which the lessees of the mine held by lease from the lords, who, by the terms of the sett, had power to distrain for unpaid dues. The position of the debenture holders, consequently, was secondary to that of the lords. Messrs. R. M. and J. R. Paull showed cause to the contrary, and the Vice-Warden has reserved his decision.

It is well known that numerous beds of anthracite, but no true coal, occur in the carboniferous strata of the North of Devon. Recently a petroleum-bearing shale has been found near Barnstaple, but not apparently in sufficient quantity for commercial speculation; however, the discovery is interesting. Nothing has been heard publicly of late about the find of mercury near the head weir, Exeter, in the Devonian slates, but it is understood that the point is to be further investigated.

A significant commentary on our last week's statement as to the large aggregate of fatal accidents which occur in connection with Cornish mines (though the loss of life in individual casualties may be small) has soon been supplied. Mr. Hambley, county Coroner, has opened an inquest at Roche on the body of a man named Gilbert, who died on Saturday last from injuries received by the bursting of a boiler of the engine at the North Goonbarrow Clay Works. A man named Menline, who was employed on the works, stated that he and four other men named Stackhouse, Gilbert, Thomas, and Pinch were, about four o'clock in the afternoon, sitting down in the kiln linch, when suddenly an explosion took place, and three of the men were hurled out at the door. The deceased was shortly afterwards taken to his house, where he was attended by three surgeons, but he died about eight o'clock the same evening. It being stated that Stackhouse, the engineman, was severely injured, the Coroner thought it advisable to adjourn the inquest in order not only to examine him but that a competent person should inspect the boiler tubes.

It has been stated that upwards of 300 limited liability companies have been started to work mines in Cornwall, and that all but a very few have disappeared. Unquestionably in many cases failure has been due to insufficient capital; but it should be remembered that within the same period some scores, indeed hundreds, of cost-book mines have also ceased to exist. The fact is that neither system can furnish a royal road to success. Both are good in their way, but with both very much depends upon the method of management.

The forthcoming report of the Commissioners entrusted with the enquiry into the pollution of the Red River will be a particularly interesting one, and will relieve the miners of the charge of having spoiled the potable character of the water, or injured the adjacent meadows. The report will state that the effluent water from the mines is polluting only by reason of matters in suspension. No sample "even approaches the transgression of the proposed standard relating to dissolved matter—indeed, in some cases mere subsidence leaves the supernatant water much purer than the average of potable waters supplied to towns, the only objectionable constituent in solution being arsenic, which is present, however, in but very small proportion. On the other hand, these waters grievously pollute and silt up the rivers into which they flow by the suspended matters contained in them." The water contains but 94 lbs. of arsenic to the ton—too little to affect the health of cattle drinking it. After subsidence or filtration the water of the Red River contains mere traces of organic matter, and is of much better quality for domestic use than the Thames water supplied to London. But the miners are, nevertheless, to blame for polluting the river to the extent they do, for it appears to be beyond question that they use 30,000 lb. of their own property to pollute it with, since 375 tons of tin are annually discharged from the mines into the river below Tuckingmill Bridge.

The oral evidence given has failed to establish any injury to health as the result of the river pollutions due to the mining industry of Cornwall. The refuse of tin and copper mines is but slightly poisonous, and in any cases in which cattle feeding on river side pastures have suffered the injury, if attributable at all to the condition of the river, was probably owing rather to the quantity of mineral matter with which the grass they consumed had become loaded during floods than to any actively poisonous ingredients which it contained; and even the destruction of fish, of which riparian owners have good cause to complain almost everywhere throughout this county, is chiefly due to a similar cause. The fish have been choked rather than poisoned, and their spawn has been buried in the slime which has subsided from the river water. This explanation of injury due to mine-polluted water does not, however, hold good in the case of the few lead mines which occur in Cornwall. The suspended matters contained in the effluent water from the buddles and slime-pits of tin mines subside very readily. In all the samples experimented upon the supernatant liquid became perfectly clear in six hours.

It is said that Dr. Emmens has taken up Holmbush, Kelly Bray, and surrounding mines, intending successfully to re-work them by introducing economy in managerial arrangements, and a new principle in the treatment of the ores. This appears to be a step in the right direction, and we hope to give full particulars next week.

#### REPORT FROM LANCASHIRE AND CHESHIRE.

June 4.—The coroner and jury enquiring into the Dukinfield Colliery explosion, after holding two sittings last week, are meeting again for two days this week, and there is only the faintest hope that the proceedings may terminate without another adjournment. At to-day's sitting the great event was the opening of the scientific department of the evidence, Mr. Maskell Peace, who appears for the proprietors, calling first Mr. Jacob Higson, the eminent mining engineer, of Manchester. Incidentally it transpired in the early part of Mr. Higson's examination that he was last year associated in concerns instrumental in raising nearly 3,000,000 tons of coal. He stated that, after a careful examination on the day succeeding the disaster, he came to the conclusion that the gas causing the explosion had not been contained in any cavity known to exist over the roof of the half-moon tunnel, which, it will be remembered, was the seat of the disaster. In his own mind he became convinced that there must be some driving in a mine above, and, on informing the underlooker with him that he intended searching for such a driving, he was reluctantly told that there was such a one in the Smithy Mine, that gas had been seen in this, and that the mothing had been built up. On this being opened, he found that over and above whatever cavities might have been caused in the roof of the half-moon tunnel, there was in this driving a gasometer, to which he had no hesitation in attributing the accident. In the building up of this mothing, he said, had been displayed the most complete ignorance of mining, and he could not bring his mind to believe that any man who knew anything about mining had ordered it to be done. He readily bore testimony to the ability of Mr. Walshaw, who was alleged to have been manager when the sealing of the driving was effected; and, when asked if Mr. Walshaw was a man likely to have done this, said he should have had no hesitation in engaging Mr. Walshaw for any undertaking, and at one time offered him an appointment. Of the efficiency of Mr. Hilton, the present manager, Mr. Higson also spoke highly. The examination lasted several hours, and was of a most interesting character, Mr. Higson, who had inspected the mine frequently, expressing in the main his approval of the way in which the colliery had been carried on. The enquiry was further adjourned until to-morrow (Friday). Mr. Lloyd again appeared as counsel for the Crown, and Messrs. Wynne and Bell, Government Inspectors, were present. Mr. Peace was for the colliery proprietors, Mr. W. C. Lord for the manager, Mr. J. Lord for the friends of the deceased, and Mr. Mellor watched the proceedings on behalf of Mr. Walshaw.

The Coal Trade is staidier, but there is no improvement in iron. In the large towns business is only just recovering from the suspension caused by the Whitsun holidays.

#### REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

June 4.—The crisis in the Coal Trade of this district continues, and the prospects of its termination are not more encouraging than reported a week ago. The demand for coal is so restricted that colliery masters do not see how to keep their collieries in more than very partial operation should the men agree to return to work, and this circumstance has a tendency to lessen the anxiety they might otherwise feel for a termination of hostilities. The miners, on the other hand, so long as they can be supported in idleness seem quite content to exist on the Union dole. The strife may, it would appear, under these conditions be prolonged almost indefinitely. The miners' agents continue to urge in their utterances at mass meetings a reference of the matters in dispute to arbitration, but the masters preserve an unbroken silence, and show not the slightest sign of retreating in any degree from the position they have taken up. An increased number of non-Union miners are at work in various parts of the district, and the supplies of fuel are by no means scarce, considering the large proportion of collieries standing idle. Native forge-coal is 14s. to 15s. 6d. per ton, according to quality.

The greatest interest has been excited by the discovery of the Thick coal at Sandwell Park, which was briefly announced in last week's Journal. The coal was struck at a depth of 418 yards, and subsequent borings have proved its thickness to be 18 ft. A block of the coal was exhibited on "Change in Birmingham to-day, and it is unquestionably of very good quality. The first load of the coal raised was yesterday conveyed in triumph to Patsball Hall, the seat of Earl Dartmouth, the owner of the Sandwell estates. The sinking is being continued to ascertain the existence or otherwise of the Heathen coal, Gubbin ironstone, white ironstone, and new mine coal, which it may reasonably be presumed underlie the Thick coal deposit. There are buyers of the shares at 500% each, but none are offering.

A meeting of the creditors of Mr. S. Marsh, of the Hateley Heath Colliery, West Bromwich, was held yesterday, Mr. J. H. Pearson in the chair. The financial statement showed liabilities 22,311l., and assets 3285l. It was decided to liquidate the estate.

In the South Staffordshire Iron Trade there is not much improvement to note this week. A blast-furnace has been re-lighted by the Barbolds Company, Bilston, thus raising the total number blowing to 40 out of 153 built. The number in operation six months ago was 93. It is very questionable whether any of the others which have been recently put-out will be re-lighted during the present year. Common cinder pig is quoted 3l. 10s. to 4l. per ton, and all-mine 5l. 10s. to 6l.; but in the present state of business quotations must to some extent be regarded as merely nominal. Shropshire pigs are steady at the rates last quoted. In the finished iron trade the principal feature of the week has been the reduction of the prices of another leading firm (Messrs. P. Williams and Co., Wednesbury Oak) to the basis of 12l. for naked bars, thus following the example set two months ago by Messrs. Thornycroft, of Wolverhampton. Earl Dudley, Messrs. Barrow and Sons, Messrs. Bagnell and Son (Limited), and other leading firms have as yet made no change in their list quotations. Messrs. J. Bradley and Co., Stowbridge, whose works have been standing idle for some weeks in consequence of the coal strike, announce by circular that they are again prepared to accept orders on the rates last quoted. Best sheets and hoops are in somewhat improved request, and prices are firm.

German and Belgian competition continues to be somewhat severely felt in the wrought-iron tube and girder trades of South Staffordshire, and makers of iron wire-rods in this district find themselves being considerably undersold by continental houses. In some cases the difference in price is declared to be as much as 30 to 40 per cent.

To-day's quotations on the Birmingham Stock Exchange include the following:—John Bagnall and Son (Limited), 7l. 7s.; Chillington Iron, 6s.; Sandwell Colliery, 500; buyers: Cannock and Huntington Colliery, 4 prem.; Ivy House and Northwood Colliery, 4 dis.; sellers: Patent Shaft and Axle, 5½ prem.; and Birmingham Wagon, 18l.

The Iron Trade of North Staffordshire is pretty much as last re-



ported. Crown bars are steady, at 10s. 5s.; bridge-plates, 12s. 10s.; and boiler-plates, 12s. 15s. per ton. There is rather less demand for puddled bars than was experienced a week ago. Coal is in abundant supply, and forge coal is being sent to Birmingham at 14s. 8d. per ton, delivered at the railway station. Much interest is felt in the successful result of the trial being on the estate of the Duke of Sutherland, near Longton, to which reference was made last week. Some valuable beds of coal and ironstone have been found, the development of which the Duke is resolved to commence without delay.

**MINES MANAGERS' EXAMINATION.**—The half-yearly examination for managers' certificates of competency under the Coal Mines Regulation Act came off at the Swan Hotel, Wolverhampton, on Monday. The examiners were Mr. J. P. Baker, the district Government Inspector of mines; Mr. W. Bassano, of Hayden Hill, near Dudley; and Mr. John Brown, of Cannock Chase; with their secretary, Mr. W. Blackmore, of Heath Town. Twenty-three candidates had intimated their intention of presenting themselves. Only 15 attended, and owing to one of the candidates not bringing certain documents, 14 were examined. Exclusive of those from the immediate district there were several from Sheffield and from other distant towns. Each candidate had to write four treatises relating respectively to the ventilation of mines; to machinery applicable to colliery uses; to surveying, both above and below ground, and laying out of new plans in old mines; and a practical paper on underground working and management, with special reference to timbering. On the same subjects there was also a  *viva voce*  examination. Commencing at ten o'clock in the morning, the examination lasted till near six o'clock in the afternoon, and the result will be known in a few days.

**BLAST-FURNACE SLAG.**—Mr. Charles Wood, Middlesbrough-on-Tees, writes:—"Under the head of 'More Experiments with Blast-Furnace Slag,' I read in the *Daily Post* (in last week's *Mining Journal*) some interesting remarks as to what Mr. Hill, M.P. for West Staffordshire, has been doing. From the remarks therein stated, it appears that Mr. Hill has to crush the slag, and mix it up with cement and broken stone, and that this can be put into buildings about 18 in. in height per day, and that this will cost about one third less than brickwork. This is certainly very good, but I think I can show you that with the same material the Cleveland Slag Working Company—who are carrying out my patents—are doing something far better. In the first place I prepare the slag whilst it flows from the blast-furnace into shingle for concrete, or into slag sand. From the latter product we make at a very low rate (say 5s. per ton) a very valuable cement. This cement, mixed with the slag shingle, can be put into walls at 6s. per cubic yard. Thus you will see that instead of costing one third less than brickwork—which costs about 22s. per cubic yard—this slag concrete, as made by my system, costing 6s. per cubic yard, shows a saving over brickwork of 266 per cent." Mr. Wood adds particulars of buildings with walls 7 ft. high, in which the material described is exclusively used; and states that it is being used also in the construction of the new railway station at Middlesbrough.—*Birmingham Daily Post*.

#### REPORT FROM MONMOUTH AND SOUTH WALES.

June 4.—Those who might have indulged in the hope that when the Whitsun holidays were over trade would again be something like active have been disappointed. Things were dull enough last week, but this week the staple trades have almost been at a complete standstill, and it is quite uncertain when business will be resumed. All contracts between masters and men have at last ceased, and before trade transactions can be resumed an entirely new arrangement must be come to between them. It was at one time thought that if employers and employed could agree upon the amount of reduction to be enforced there would be no further obstacle in the way of work being proceeded with. But such an expectation has proved to be erroneous. The iron and coal workers have nearly unanimously agreed to submit to the 10 per cent. reduction proposed by the masters, but there are restrictions connected with it that the men strongly object to, and especially the colliers. Owing to certain rumours which were afloat, the masters determined to secure themselves against some Trades Union movement which was likely to prove disastrous to one or two of their numbers and therefore it was agreed that the usual monthly contracts should not be entered into until work was resumed at all the collieries at the 10 per cent. reduction. If the men really intend to accept the 10 per cent. reduction, and resume work, one and all, this provision would, of course, at once be non-effective. As a matter of course, while the present stagnation continues there will be no new transactions entered into, and therefore it is useless looking for new orders for iron or any other commodity. The iron trade must, however, still be described as inactive. Similar remarks are applicable to the coal trade. The demand is sluggish, and as stocks were large, the stoppage at the collieries has not yet had any effect upon the market. This is the case in regard to the steam and house coal branches. There is not only no improvement in the Tin-Plate Trade, but it is getting so much duller, that other works are either being stopped altogether or only partially kept on, besides those included in the lock-out.

#### REPORT FROM SCOTLAND.

June 3.—The Warrant Market has advanced steadily since the date of our last report—say, from 88s. last Wednesday until 95s. 3d. was paid this afternoon, the closing price to day being 95s. The state of the trade may justly be described as deplorable in the extreme, and the advance in price does not arise from any improvement in the demand, but is caused by speculation acting on a small stock and a diminished production. It is rumoured that several furnaces are to be put in blast this week, and it is much to be desired that things may gradually assume a more natural aspect, as the present anomalous state of matters only tends to increase the prevailing depression and render a continuance of low prices and reduced wages the more probable. We cannot yet give detailed prices of the various brands, but quote No. 1 g.m.b. 95s.; No. 3, 93s.

SHIPMENTS.		
Week ending May 31, 1873	Tons	18,800
Week ending May 30, 1874	Tons	7,418
Decrease		9,984
Total decrease since Dec. 25, 1873		104,669
Imports of Middlesbrough pig-iron into Grangemouth:—		
For the week ending May 30, 1874	Tons	1,950
For the week ending May 31, 1873	Tons	400
Increase		1,550
Total increase for 1874		25,778

Yesterday the Pig-Iron Market was stirred a little through the anxiety shown by the Germans to secure iron, but as the day wore on the market became quieter, and closed as above. The reason of this temporary spurt was scarcely known to the trade, as there was nothing new in the aspect of the wages dispute with the miners and the ironmasters, and the furnaces in blast were much the same in number as last week. There was nothing, therefore, to warrant the advance but the combination of a new class of "operators," and it was consequently followed by a slight relapse. The miners seem still hopeful of success, although they were warned by Mr. Macdonald, at a mass meeting held at Kierros on Monday, that while "he had never hesitated to point out to them the time when they could be advanced—when the trade could afford it—he as honestly and faithfully told them when they should submit to a reduction, however unpalatable it might be, when the trade could not afford a longer continuance of the wage." He further "affirmed that he still held his position as the friend and benefactor of the miner, and said that he was more proud of it than if he had the wealth of the Bank of England or obtained the honour of knighthood. He advised the men to reserve their funds, and turn their attention to co-operative mining—keep their money and raise more, until they were able to acquire a colliery of their own."

Malleable Iron is in no way improved this week—makers resorting to short time—the peculiar changes in pig-iron giving buyers hope of a reduction, while makers are compelled to harden their prices. The shipments are about an average, and a consignment of locomotives to Peru brings up the estimated value of machinery. Our shipbuilders are very busy—the Fairfield firm paying between 7000*l.* and 8000*l.* a fortnight in wages—but a good quantity of their iron is coming from the South. The puddlers of Blochairn have a dispute with their employers.

The Coal Trade is moderately active, but prices have to be reduced to shippers, whose orders are under an average—the shipments for the week being only 31,094 tons, against 40,177 tons in the same week of 1873. Notwithstanding the thousands of colliers who are going about idle—on strike—there is a sufficiency of coal offering, and were they all working the market would become glutted in a month. In these circumstances, coalmasters manage to keep prices well up, but a short time longer will send the men into the pits, and they will then have to face a further reduction, which might be avoided by adopting Mr. Macdonald's advice at once—submission.

The aid of our subordinate law courts is still sought to authorise

ejections from their houses of these idlers, and their wives and families—the miners—a course which is only reluctantly entered upon, but which is necessary to bring to reason those whom nothing else will teach.

The proprietor of the Dykehead Colliery, near Hamilton, was on Thursday fined 10*l.* by Sheriff Spens, for having on April 2 failed to properly fence the shaft of the coal pit of which he was owner. He was also accused of failing or neglecting to establish the special rules at the colliery, but on account of some doubt being expressed by the Sheriff as to the competency of the complaint on this point, Mr. Kay, who appeared for Mr. Ralph Moore, Government Inspector of Mines, withdrew the charge.

We understand that Dr. Robertson, jun., of Clyde House, Renfrew, has been appointed by the Borneo Company, of London, to make a survey and geological exploration of that island. He proceeds to it, via Brindisi, early this month, taking with him a staff of borers.

#### REPORT FROM DERBYSHIRE AND YORKSHIRE.

June 4.—As usual, the men at the ironworks and collieries have been more than usually diligent after the holidays, in many instances for the very good reason that their capital has been exhausted. The colliers indeed have been so much occupied in replenishing their exchequers that they have not even had time to consider the question of the reduction of wages, which has been so prominently brought before them. Trade generally is very quiet, although the collieries have been working better than for some time past, and some stacks of coal have disappeared from the pit hills. The demand for London is by no means brisk, and scarcely an average tonnage is going over the Midland Railway from the pits at Clay Cross, Langley Mill, Eckington, and Shipley. Despite the dull trade, falling prices, and new collieries being opened out in all parts of the country, the leaders of the working miners have taken what many persons consider the extraordinary step of investing their accumulated capital in the purchase of collieries. The prospect of making profits does not appear very bright under such circumstances. The South Yorkshire Miners' Association have paid a deposit of 11,000*l.* for the Shireland, and in a few days will have to pay about 25,000*l.* more; this will have the effect of exhausting the capital and of preventing a strike—which the executive, in all probability, had in view in purchasing the colliery. Mr. Fowler, the chairman of the Sheepbridge Coal and Iron Company, has intimated his intention of erecting a church at New Whittington, in the immediate vicinity of the works. Mr. Fowler, it may be said, is the founder of the place, which is now a really thriving little town, and which we remember passing over less than 20 years ago, when it was a mere plain. During the past week the designs and plans for the Stephenson Memorial Hall have been exhibited in Chesterfield, and there is now every prospect that we shall have a large and handsome building, worthy of the great man to whose memory it is to be raised. Stephenson, it may be said, was about the first man to open out the vast mineral wealth which abounds throughout the entire length of the Midland Railway from Sheffield to Chesterfield, Clay Cross, and along the Erewash Valley line.

The Sheffield trades have undergone no material change, and several of them are far from active. The Bessemer works are still busy, and there are some very large orders in hand for rails for Russia. Most of the cutlery branches are quiet, and there is no improvement in the business doing in cast-steel, either plain or manufactured. There has been more doing at the collieries in South Yorkshire than for several weeks past, but prices remain without alteration. The exports of coal from Grimsby has been very small as compared with last year, but there has been a very large increase in the tonnage sent from Hull to the Continent. The wages question, as might be expected, is the principal topic now under discussion. On Tuesday there was a delegate meeting at Barnsley, when about 24,000 miners were represented. There was not the least excitement in the town, and the proceedings were comparatively quiet. Many of the delegates who were sent to the previous meetings, and voted in favour of a reduction, were superseded by others who had orders either not to submit to any reduction whatever, or to a very trifling one. The result was that the proposal of the colliery owners for a reduction of 10 per cent. on the gross earning was successfully opposed, and that for a reduction to the extent of 10 per cent. on the wages paid in October, 1871, was agreed to. This decision was made known to the employers on Wednesday, and will be taken into consideration at a meeting to be held on Monday next. Many persons are of opinion that a lock-out will be the result of the action taken by the men. We, however, are not of that opinion, for we believe that matters will be amicably arranged, more especially as some of the colliery owners have intimated to the men that work will go on as usual at the ordinary prices. A strike is imminent at the Churchlane Colliery, near Barnsley, where the men have been receiving about 20 per cent. more for cutting coal than is paid at other collieries, and the company have given notice of their intention only to pay the same rate of wages as is given at other places working the same seam.

#### SOUTH STAFFORDSHIRE AND EAST WORCESTERSHIRE INSTITUTE OF MINING ENGINEERS.

A meeting of members was held in the Geological Museum, Dudley, on Monday; Mr. JOHN HUGHES presided, and there were present about 60 members, among whom were Mr. Henry Johnson, Mr. W. Spruce, Mr. D. Peacock, Mr. J. Cole, Mr. G. Spruce, Mr. D. Rogers, Mr. Dando, &c. Mr. Edward Phillips, of the Talbot Colliery, West Bromwich, was elected a member. Mr. John Tarley, coalmaster, Woodsetton, was proposed as a member, to be elected next month.

The SECRETARY (Mr. H. Johnson) said he had received about 50 applications for the particulars of the Institute's premium of twenty guineas for the best coal-cutting machine suitable for the district. He had, however, received but two letters, stating that competitors were willing to show their machine. These were from Mr. Macdermott, of London, and Mr. Joseph Edwin Smith, of Wolverhampton. The former said he was sorry that he was unable to show the Institute his machine, because only one had been made, and as that was at work at Aberdare he had not been able to remove it. It was very light and manageable, and weighed but 2½ cwt., all told; it could be worked by two men and a boy, and required no preliminary fixing. The machine would cut a groove of any depth from the face up to 6 ft., and the cost would be but 60*l.* Mr. Smith had not been able to send his machine, but he seemed very sanguine about it.

Upon the motion of Mr. T. DANDO, seconded by Mr. THOMPSON, it was agreed that the time for sending in the machines or models should be extended until the August meeting of the Institute, when, no doubt, there would be a larger number of competitors.

The VICE-PRESIDENT said the meeting ought not to conclude without congratulating one of the ex-presidents on the discovery of the Thick coal at Sandwell. Many had sneered at his uphill work, but he had kept to his work and succeeded.—Mr. HENRY JOHNSON, in reply, said they had found 6 yards of very excellent coal. They had begun sinking into it that morning, and would probably get to the bottom of it by Wednesday night, and on Thursday he hoped to inform the public of the whole result. He was sure he might say for the directors that on an early day the Institute would be invited to judge for themselves.

In the afternoon, the members paid a visit to Aston in order to inspect the pumping plant of the Birmingham Waterworks Company. Among those who joined the excursion were—Messrs. John Field (president), H. Johnson (ex-president), J. Hughes (vice-president), H. Johnson, jun. (secretary), D. Peacock, I. Foley, E. Foley, W. Spruce, G. Spruce, D. Rogers, J. N. Addenbrooke, B. Callar, J. M. Fellows, J. Thompson, C. J. Cooper, J. H. Wythes, J. Broughall, R. Latham, D. Plant, &c. The party were met at the station by Mr. J. W. Gray, M.I.C.E., engineer to the company, and were by him conducted over the pumping houses in Lichfield-road. Messrs. Watt and Co.'s splendid condensing Cornish engines excited great admiration. Both these and the other large engines at the station were in beautiful order, and all accessories were nothing less than perfect. Passing between the two reservoirs the party next proceeded to the Ashton well, where the flow of water from the pump could be observed, and a draught of the water obtained as it came from a depth of 407 ft. from the surface of the ground. The water wheel, lifting water for condensing purposes, was also inspected, and the visitors then made a trip to Aston Hall. After viewing the

museum at the hall, the party partook of tea in Mr. Quilter's assembly room. In the course of the subsequent proceedings a number of thanks was passed to the waterworks company and to Mr. Gray for his courteous attention. "Further success to the Sandwell Colliery" was also drunk.—Mr. H. JOHNSON, in responding, remarked that so much had been said about Sandwell Park that he was beginning to get tired of it. No doubt by Wednesday night he would have got through the coal, and then he should be very glad indeed to lay before them and the public the result as to the thickness and quality. No doubt the discovery of coal at Sandwell would be of great importance to the neighbourhood, at the same time he thought that those who had embarked their money had the first claim in the matter. Among the remarks which had been made as to the undertaking being a success or not, some had been made favourable character, and had tended to buoy him up, but at the same time some very ill-natured remarks had been made. At the future day he should be very glad indeed to lay before the Institute the result of the investigation from beginning to end, the strata other details. At present, however, that information must be withheld, because, the adjoining properties being in course of development, he did not see why the company who had spent their money should find information for other people. When the thing was thoroughly completed he should consider it his bounden duty to lay all the particulars before the Institute, and give the members an invitation to visit the colliery.

#### OUR LEAD AND SILVER MINES.

From the last issued official statistics—those for 1872—it appears that the total quantity of lead ore raised and sold in the United Kingdom during 1872 was 83,968 tons 3 cwt., of the value of 1,146,165*l.*, and representing 60,455 tons of lead, of the value of 1,209,115*l.* During the same time 628,920 ozs. of silver, of the value of 1,723,000*l.*, was obtained. For lead ore Durham and Northumberland occupies the highest place, producing upwards of 19,000 tons, whilst the highest produce of silver is from Cornwall, which yielded 207,710 ozs. The subjoined is the summary for 1872:—

No. of Mines	Counties.	Lead ore.	Lead.	Silver.
		Tons cwt.	Tons cwt.	Ozs.
18	ENGLAND:—			
1	Cornwall	5,463 10	4,068 15	207,710
5	Devonshire	746 9	522 6	1,102
4	Somersetshire	1,322 5	602 18	1,302
194	Derbyshire	5,612 0	4,191 3	1,000
2	Staffordshire	24 14	18 14	—
10	Shropshire	7,386 17	5,602 6	2,900
34	Yorkshire	5,311 5	3,954 8	800
30	Cumberland	3,721 17	2,813 2	70,150
7	Westmoreland	1,679 2	1,259 8	17,200
32	Durham and Northumberland	19,106 10	14,399 4	72,710
	WALES:—			
1	Breconshire	8 0	6 0	—
40	Cardiganshire	6,764 3	4,998 13	41,600
1	Carmerthenshire	651 0	475 15	2,300
1	Pembrokeshire	130 0	97 10	400
1	Radnorshire	32 13	24 15	1,100
11	Montgomeryshire	8,059 14	6,042 0	35,710
1	Merionethshire	17 6	13 0	—
6	Denbighshire	3,677 18	2,758 17	14,470
29	Flintshire	3,198 5	2,428 7	18,600
12	Carmarvonshire	2,742 10	2,060 1	500
10	ISLE OF MAN	3,529 0	2,639 2	145,430
2	IRELAND	962 0	726 5	1,040
4	SCOTLAND	3,865 5	2,931 7	5,000
455	Total of the United Kingdom	83,968 3	60,455 15	628,920

#### DEAN FOREST—RAILWAY ACCOMMODATION.

The Royal Forest of Dean was long neglected, except by a few local capitalists, who invested in the coal and iron mines, but very much kept their own counsel as to the value of the mineral treasures which were known to exist in abundance—to the outside world the Forest remained almost unknown. The projects and schemes of the few mining adventurers in the districts were almost entirely confined to their own commercial designs, exhibiting scarcely any public spirit for the general benefit of the Forest population. This, whilst true in a general sense, applies with immense force to railway accommodation. Admitted that railways are of great importance in relation to coal, iron, and stone, in a commercial sense for the outlet of such produce to distant markets, yet it might have been expected that men engaged in trade, and realising large profits and incomes, would have thought of the needs of the public surrounding their works, so as to have lent their powerful influence and a portion of their capital, with a view to secure the advantages of passenger trains running through the neighbourhood; but, alas! there has been such a lamentable lack of public spirit that up to the present date the Forest of Dean is without passenger railway accommodation. The Bullo branch from the South Wales Railway to Cinderford and Churchway has been constructed for almost a generation, and could have been made available for passenger traffic during the whole time; but, strange to say, it has only been used for mineral and goods traffic hitherto, and such is the apathy of the Great Western Company that we have no faith in its running passenger trains over the branch until shamed into it, or prompted to do so by a selfish rivalry in opposition to the Severn and Wye Company, which is expected shortly to open its line from Lydney to Lydbrook for passenger traffic. Then, perhaps, or shortly afterwards, the Great Western directors may wake up to action, but it ought never to be forgotten that our gratitude for this boon is due to the Severn and Wye Company, and not to the Great Western Company. We know that it has been usual to offer as an excuse on behalf of the latter company an assumed fact—that the tunnels and gradients of the Bullo line are not suitable or safe enough for passenger trains.

But this apology will not hold, for the simple reason that there is not the substance of truth in it. We have not the gradient before us, but from common observation we are led to believe that the incline from Brimsport station to Sopperton tunnel, between Stroud and Cirencester Junction, is considerably steeper than the Bullo branch into the Forest. And as to the tunnels, perhaps the Blue Rock and Lewdley tunnels, the two short ones, might require some further portions of rock cut off in some places from the roof or sides, which could be speedily effected, but the long tunnel nearest to Bullo is an excellent one, and fully suited for passenger carriages to run through. The sharper curves on the line could be eased a little, and the branch, with but little trouble, time, and expense, could be rendered safe for passenger trains. That part of the excuse which assumes that the line is unsafe is worse even than the other which refers to tunnels, curves, and gradients, because, if true, it would prove the reckless culpability of the company in not only permitting but sanctioning year after year its own servants daily exposing their persons and lives going up and down the line with goods and truck trains. But not only has the Great Western Company neglected the public in point of passenger train accommodation, but it remained supremely indifferent to railway extension in the district, although the development of the mineral resources of the Forest called loudly for it in various directions, but finally appeared their favourite dogma and motto for this district. However, thanks to the enterprise and public spirit of the Severn and Wye Company, a move was made in the right direction, and now that company has lines in course of construction, central, and diverging to east and west sides of the Forest, so that we are in a fair way to be ultimately pretty well supplied.

The central and eastern loop line round via Lightmoor, Foxes Bridge, and Trafalgar, to Lydbrook, will very shortly be opened for the running of passenger trains; and to the collieries just named it has run coal trains for some time past. The branch in course of construction from the trunk to Coleford is advancing, and when the Great Western connect their Monmouth line with Coleford there will be a continuous run of rails from thence to Lydney. There is a short branch from the South Wales up through the village of Blakeney, and as far as the Fancy pit, which the Great Western



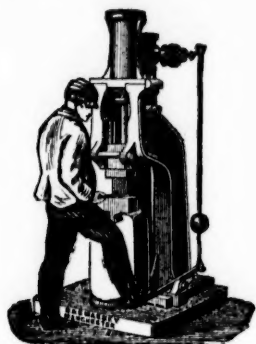




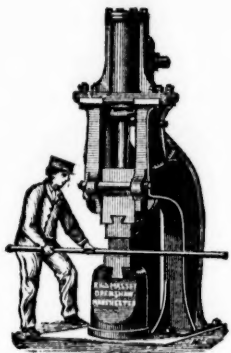
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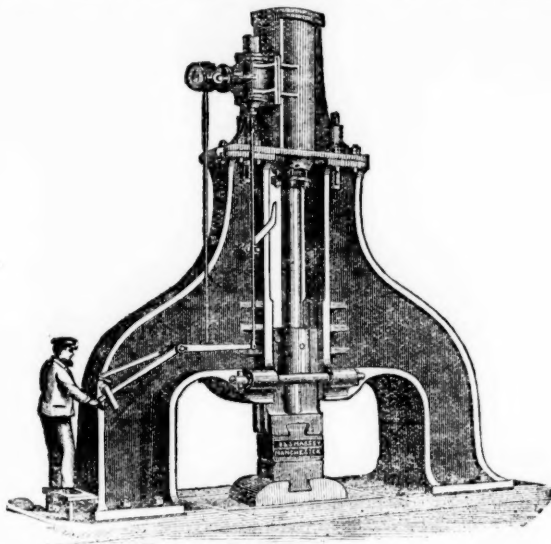
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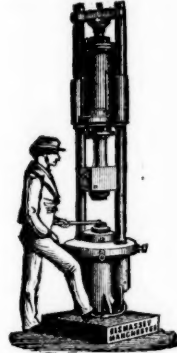
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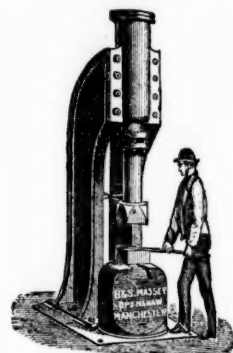
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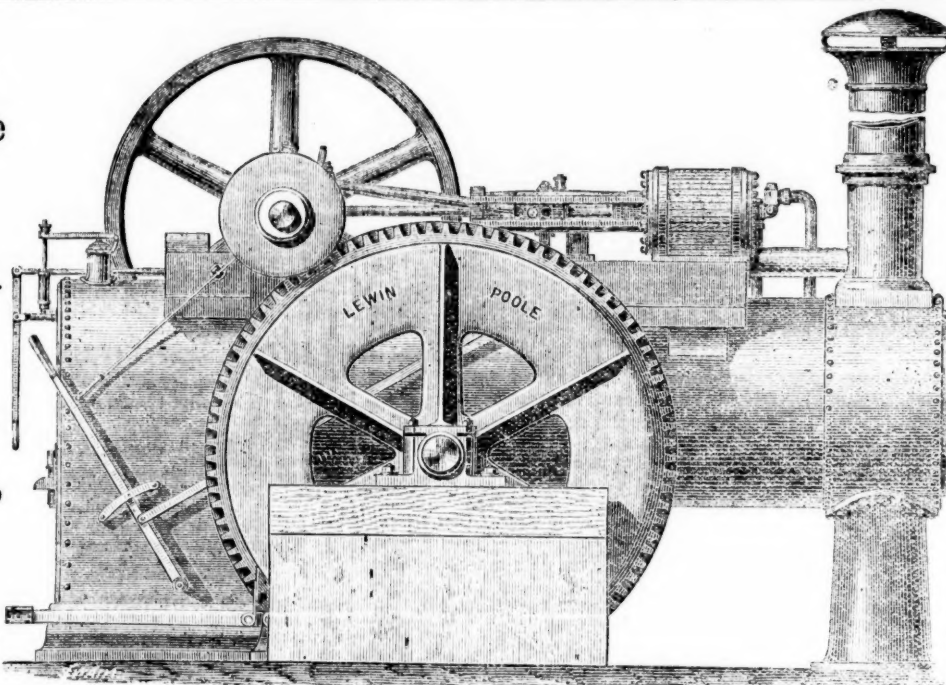


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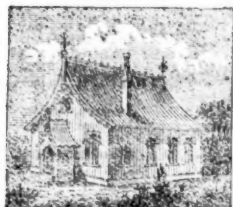
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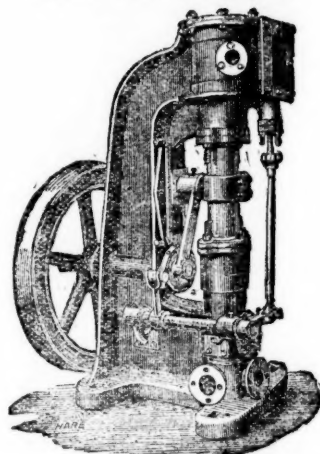
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